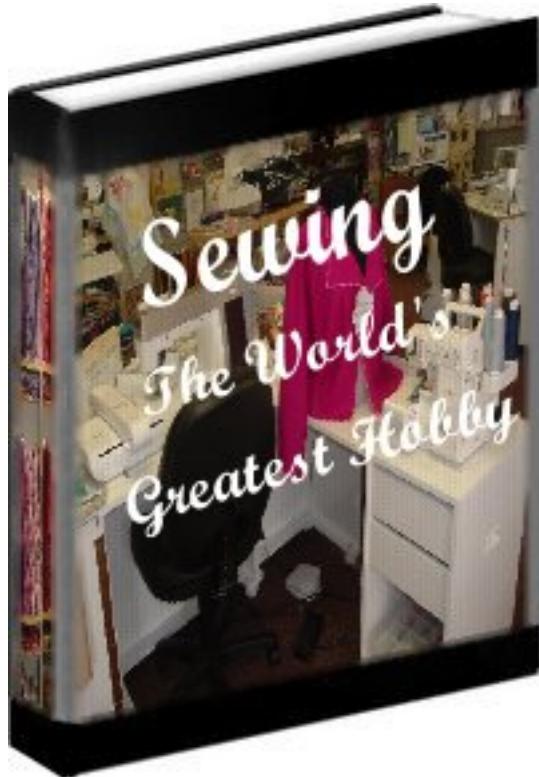


**Sewing
The World's
Greatest Hobby**

By
Donna & David Trumble



Sewing The World's Greatest Hobby

By
Donna And David Trumble

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YOUR WORLD'S GREATEST HOBBY

PREFACE

The World's Greatest Hobby is the first book in a series of dynamic resource books designed to give you detailed how to explanations, directions, and information on hundreds of questions concerning sewing and quilting. The aim is to provide simple straightforward practical explanations and helpful information that you will find easy to use and understand. We hope you will find the information here to be quickly understood, simple to follow, and easy to use.

SEWING ANSWERS. COM is a work in progress. Sewing Answers.Com is developed to provide practical answers to your sewing and quilting questions. These questions have been collected from among thousands of questions asked by sewing students and requested over the internet, user groups, and search engines.

If you have sewing or quilting questions, please submit your questions to: Contact@sewinganswers.com.

For more answers to your sewing questions check out: www.sewinganswers.com :

In addition to our eBooks, please check out our online store with its hundreds of sewing tools, supplies, notions, and more.

www.sewinganswer.com

www.sewandquiltstore.com

INTRODUCTION



Dear Reader,

Our hope is that you will enjoy sewing more and sew with much greater confidence by having these sewing and quilting resources at your fingertips.

The Sewing Answers.Com team includes professional sewing machine technicians, sewing educators, and professional sewing business owners and managers.

The Sewing Answers.Com team brings over fifty years of professional sewing experience: Custom sewing, Alterations, Drapery Production, Sewing Machine Repair, Embroidery Design, and Teaching Sewing.

The Sewing Answers. Com team brings over 10,000 hours of sewing education, workshops, and trainings. Our team includes graduates of Baby Lock Tech, Bernina University, Necchi Sewing Machine School, V.D.T.A., Milligan College, Towson University, Indiana University, and numerous other state universities.

Donna Trumble fell in love with sewing as a nine year old girl and has been fascinated by sewing, home décor, heirloom sewing, custom sewing, costume design, alterations, and quilting ever since. She has been a professional seamstress since 1968, when she conducted her own alterations business to pay her way through college.

While teaching in public schools, she was constantly amazing her fellow teachers and friends with her sewing

skills. As mother of five children, Donna provided steady flow of quality clothes, suits, dresses, window dressings, and more.

Donna has original designs that have appeared across the country in Revolutionary War reenactments, wrestling rings, and formal events. Over the past fifteen years, Donna has managed an alterations shop, a drapery and window covering workroom, custom sewing center, and opened her own sewing and quilting stores. Today, Donna is responsible for the sewing education of three sewing centers in central Texas.

Donna and her husband, David have been married for almost forty years. They have five grown children, four sons and a daughter. They have seven grandchildren.

David Trumble is a minister, author, sewing machine technician, and educator. David earned his doctor's degree in 1985, and has worked as a Minister Of The Gospel for over thirty years. He has vast experience with sewing including work with Donna in several sewing businesses (alterations shop, a drapery and window covering workroom, and custom sewing center). David has completed advanced technical training as a sewing machine technician and has worked in the repair shop for over eight years. He also has numerous articles and books published in multiple areas of interest. David and Donna are part owners of Temple Sewing and Supply, Inc. of Temple, Texas a chain of sewing and quilting stores in central Texas.

HOW TO USE THIS RESOURCE

Sewing, The World's Greatest Hobby is first and foremost a practical sewing resource composed of practical answers to frequently asked sewing and quilting questions. Use it as a sewing encyclopedia dictionary to look up answers to your questions.

Sewing, The World's Greatest Hobby is also a resource listing of many charts, lists, and practical bits of information to help make your sewing easier.

To Use:

- Click on the chapters listed by question to be taken directly to that article.
- To the left you will find a tab marked "pages". Scroll to the page of interest and click on that page.
- Use your up/down arrows or navigation scroll bar to scroll up/down to articles of interest.
- If you prefer, you can read each volume straight through like a book.



Chapter One

Sewing

The World's Greatest Hobby

The wonderful world of sewing welcomes you.

The air is filled with excitement. Thrills and fun are just waiting for you. Sewing offers you limitless opportunities for self expression. Sewing gives well deserved feelings of pride and personal satisfaction. You can achieve untold creative possibilities.

You may sew for practical purposes, and know you have saved money. You may take pride in solving some big challenge. You may take great satisfaction from achieving your goals.

Or you may creating something truly special. You may sew as an art form to express your inner self. You may make beautiful things. Or you may create a treasured heirloom. In any case, you will always find sewing rewarding, uplifting, and satisfying.

The keys to success in sewing are:

1. **Knowledge.**
2. **The right equipment and tools.**

In this extensive sewing course we will teach you the back ground information, the skills and techniques, and the right tools and equipment for the many different kinds of sewing. Together these keys to success ensure your success

in each and every project. The answers, instruction, guidance, and support are here to meet your needs.

Confidence comes with experience. The whole world of sewing awaits you. So, relax, enjoy, and take pride in your creative possibilities.

What are your possibilities?

There are virtually no limits.

- ✓ Yes, you can alter and repair your ready made clothing.
- ✓ Custom made clothing and other items now come in the size, color and fabric YOU want and choose.
- ✓ Yes, you can make clothing, draperies, home decorations, wall hangings, table runners, heirloom treasures, beautiful gifts, quilts, crafts, and so much more.
- ✓ You can make exciting personal items like lingerie, robes, and sleepwear.
- ✓ You can make all kinds of practical things for your home, family, and heritage.
- ✓ You can create beautiful artwork.
- ✓ Yes you can design, layout, sew, and quilt gorgeous quilts and wall hangings for you home, for heritage, for whatever you desire.
- ✓ You can sew all kinds of decorative accessories like purses, vests, and throws.
- ✓ You can take your ordinary ready made clothes and embellish them with embroidery, appliqué, sequins, cording, and decorative stitching to turn the ordinary

into fabulous one of a kind wearable art or elegant masterpieces.

The possibilities are endless, but you may want to try them all. The sources of inspiration and new ideas are endless. You may create something totally off the top of your head, or you may be inspired to make some of the thousands of projects available in books, magazines, videos, and sewing discussion groups. When you make something yourself, it is uniquely yours.

Once you begin, the whole world opens up. Your new skills become a great reservoir of resources that you can use in a thousand different ways. Try dyeing your own fabrics, adding sequins, making a hat, decorating a sweatshirt. Mix your sewing, embroidery, crafting, and other skills together to express yourself.

Whatever you can imagine, you can create.



and gold leaf.

Long before the first written word, needle and thread were used to make clothing. Across the world, Asians, Europeans, Africans, and American Indians sewed clothing, tents, shoes, bags, and more.

For nearly 20,000 years every stitch of sewing was done by hand – one stitch at a time.

The wealthy would decorate their clothing with jewelry, braid,

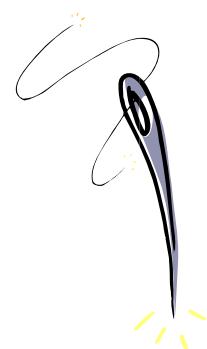
Soldiers wore coats lined with pieces of metal pounded flat and tied together as armor.

The need to sew led to advances in taxidermy and the treatment of animal hides. Over time animal skins gave way to other fibers. In recent years man has developed fabulous synthetic fabrics as well.

The children's story of Rumplestiltskin tells of spinning straw into gold, and that is not so far fetched when you consider the invention of thread and yarn and loom to sew and weave cloth.

Cotton, wool, and silk became the fibers of the commons and the wealthy. Hand woven fabrics were the only fabric available. Hand sewing with needle and thread were the only way to sew fabrics together. During the past two hundred years fabrics and sewing technology have been refined to amazing levels.

Special skills came into high demand. Thousands across the world became professional weavers, knitters, and sewers.



It took nearly 20,000 years (if we believe the archeologists) for the first original thinkers to offer the first practical solutions. Like the American Indians, many of whom were nomadic; poles dragged along were good enough. They knew nothing of the wheel, wagons, or carriages. Hand weaving and hand sewing were the status quo, and any suggestion to mechanize sewing would face an uphill battle for acceptance. Change seldom comes easily or without challenges.

Hand sewing ruled at the time of King David (1000B.C.), Julius Caesar (Rome 60B.C.), Jesus Christ (33 A.D.), Fall of Rome to Genghis Khan (600 BC), Columbus



discovers America (1942 A.D.), King James Bible (1611A.D.), The Declaration of Independence (1776 A.D.) and The Battle of the Alamo (1836A.D.)

Today, Sewing is the world's greatest hobby. While it used to be a crucial skill for survival, sewing today offers new horizons of self expression and creative joy. Today sewing is fun, relaxing, and deeply satisfying.

When we think of sewing, different people think of different things. In the narrow sense, sewing today relates to the Machine Sewing Arts which is the focus of this book. In the broader sense, however, the term "Sewing" denotes the use of thread and needle in a much wider range of activities and needle arts.

Before we launch in to our adventures with machine sewing arts, lets take a glimpse at the full range of what sewing has traditionally included.

WHAT IS THE SCOPE OF SEWING?

"Sewing" may be divided into two categories:

1. Hand Sewing Arts
2. Machine Sewing Arts.

CHAPTER TWO

Hand Sewing Arts

Hand sewing arts are also described as needlework. They include Crochet, Hand Embroidery, Knitting, Macrame', Rug Making, Tatting, Cross Stitch, and Hand Sewing. These arts have dominated sewing for thousands of years, and are considered to be traditional arts of excellence and beauty using threads and needles.

Crochet

Crochet is a needlework system of interlocking looped stitches formed by a single hook and a single yarn for creating delicate open designs. Crochet became popular almost four hundred years ago as a means to creating "American Lace". Today, crochet is a treasured heritage skill used for making items for home and family such as pot holders.



When you look at a Crochet pattern, it may look a bit intimidating. It is full of strange letter combinations that require you master the Crochet code or language. For example, you will see abbreviations for beginning as beg; block as bl; and cluster as cl. Not only do you need to master the code, you have a whole set of terms, definitions, intricate designs, and skill

sets to learn. It is indeed a highly skilled art form.

Crown. Beginning at tip, ch 10, join with sl st to form ring. 1st rnd: * Ch 10, s c in ring, repeat from * until 24 loops are made, then ch 6.

2nd rnd: S c in 1st loop, * ch 5, s c in next loop, repeat from * around, ending, with s c under ch-6 of previous rnd.

3rd rnd: Ch 5, s c in each loop with ch-5 between s cs.

4th rnd: * Ch 3, 5 d c under next loop, ch 3, s c in next loop, ch 4, s c in same loop, repeat from * until 12 5-d c groups are made, then ch 3, s c in next loop, ch 5, s c in next loop, ch 2, s c in first d c of 5-d c group.

5th rnd: Ch 5 (to count as tr and ch-1), tr in each of next 4 d c with ch-1 between each tr, * ch 4, s c in next ch-4 loop, ch 4, tr in each d c of group with ch-1 between each tr, repeat from around. After last group of trs is made, ch 4, s c in next ch-4 loop, ch 4, sl st in 4th ch of ch-5 first made.

6th rnd: Ch 6 (to count as tr and ch-2), tr in each tr with ch-2 between trs, but omitting ch-2 between groups (that is between last tr of one group and 1st tr of next group). After last tr, join with sl st in 4th ch of ch-6 first made and sl st to 1st tr.

7th rnd: * Ch 5, s c under next ch-2 sp, repeat from * around (do not make s cs between 2 trs that come together without ch-2 between), ending with ch 5, s c in 1st loop.

8th rnd: * Ch 3, 5 d c under next loop, ch 3, s c in next loop, ch 5, s c in next loop, repeat from * ending with last s c in ch-3 first made.

Actually doing crochet is a matter of using the hook or large needle to twist, wrap, insert, arrange, and otherwise hand loop a single yarn to form a multitude of stitch patterns. The combinations form stitches described as half crochet, single crochet, double crochet, and treble crochet. The stitches are chained together in rows, joined, and expanded to form the interlocking patterns. Different sized crochet hooks made of various materials are also used for a

variety of purposes. The end result is an intricate design such as one of the afghan stitch patterns (Basic, Cluster, Crossed Tunisian, Framed Squares, Mesh, Purl, etc.) There are hundreds of different patterns and variations producing truly amazing crochet art.

Hand Embroidery

Embroidery is a technique to embellish fabric using decorative threads. Color, texture, and design become the artistic tools of expression with thread and needle. These techniques are commonly applied to borders, motifs, and elaborate designs on the face of the fabric. There are hundreds of different stitches used to create beautiful effects. There are border stitches, design stitches, edge stitches, fill stitches, outline stitches, and more.

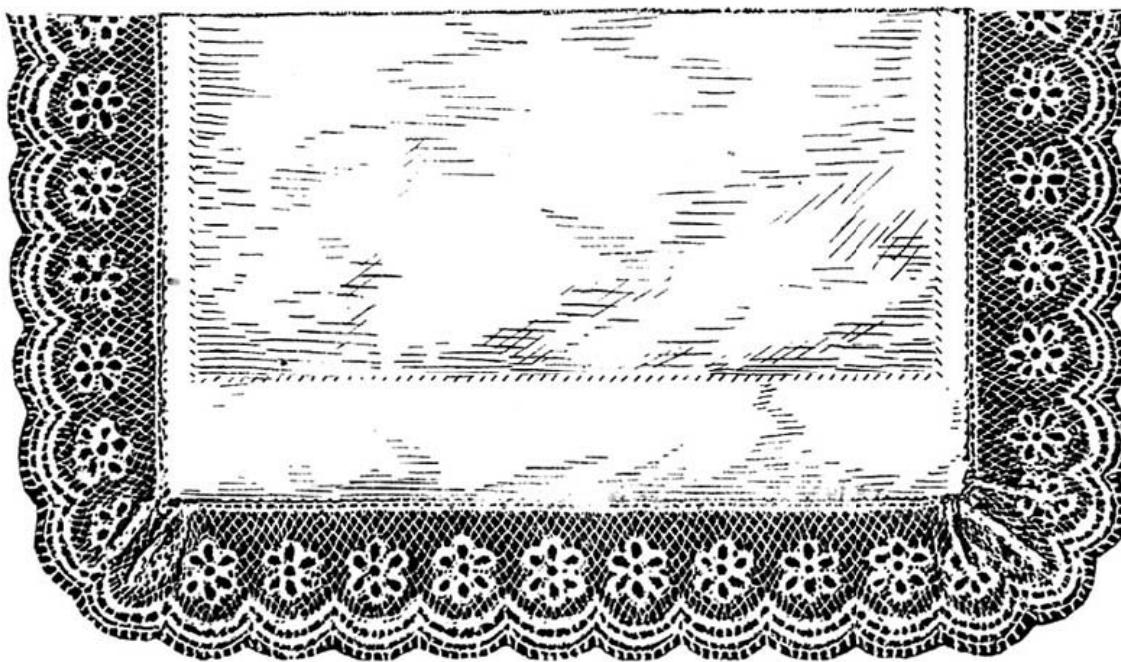


Fig. 60.— Showing lace sewed on, and corners turned.

There are special tools and materials used in this art form. They include a collection of needles including the crewel needle (short needle with long skinny eye in sizes from 1 to 12. Lower number is largest needle.), chenille

needle (sizes 13 to 26), and tapestry needles (sizes 13 to 26). Embroidery frames are used to stabilize the fabric while it is being worked on. These come in many sizes from small lap circles to large free standing square frames. Fabrics may range from simple open mesh canvas to elaborate tapestry. Embroidery scissors both large and small are essential for cutting yarns and threads. A stiletto may be used to make eyelet holes. A thimble is essential for protecting the finger from the sharp end of the needle when pushing through the fabric. Yarns and threads of all kinds are used to create amazing color, texture, and design.

Embroidery stitches may be classified by how they lay on a fabric. Flat stitches lay flat. Knotted stitches are more raised. Liked stitches offer an interlocking appearance. Looped stitches include the blanket and feather stitches which offer a combination of flat and raised appearance. Hand embroidery stitches rival the most advanced sewing machines in complexity and number of different stitches.

As sheer artwork, hand embroidery is often considered superior to the more modern machine embroidery. There are designs and features of hand embroidery that can and will probably never be reproduced through machine embroidery. Although, machine embroidery is much faster, hand embroidery is like painting by hand with thread and yarn.

Hand Knitting

Hand knitting is very similar to crochet in that it is a needlework system of interlocking looped stitches formed by using two (instead of one hook as in crochet) large knitting needles and a single yarn for creating delicate open designs. It has been traced back to about 200AD from the region of modern day Arabia. Theory has it that Arabian travelers such as sailors, traders, and adventurers took this special

skill with them and taught it to people wherever they traveled.



Knitting remains a popular fashion oriented needle art. Among the more common items made today include afghans, baby blankets, booties, and other novel heirloom items.

Like crochet, knitting has a special code of its own. When you begin looking at a knitting pattern for the first time, it looks like long lists of gibberish. The code might look something like this: inc R for increase to the right; pss0 for pass or pull slipped stitch over; or wyib for yarn to back of work. It takes some time to figure out all the details of

the code, and even longer to master the intricate skill sets to make the almost limitless stitches and patterns.

Basically, the vast array of knitting stitches are variations on either the basic knit stitch or the purl stitch. These variations are applied in many different designs as well.

Knitting needles are available in both an American and a British system of identification. In the British system, they run from eighteen down to eight (18, 17, 16,...13,... 8). From the British thirteen to the British eight you have equivalent American size zero to ten and a half 0,1,2,3,...). There are also circular needles, double pointed straight needles, jumper needles, and single point straight needles.

Knitting yarn comes in a wide range of fibers (wool, cotton, silk, linen, synthetics), colors, textures, sizes, and twists. Each yarn offers its own special uses and qualities. It is simplest, however, to simply follow the pattern for best results.

Macrame'

Macrame' is basically knot tying to produce fringe or coarse lace designed in a geometrical patterns. It has an uncertain origin, but has been traced back to the Spain and France and even back to Middle Eastern roots. A quick glance at macrame' and you may be convinced that it is far too complicated to actually do or learn, but once the two basic knots are mastered, it is sometimes described as the easiest of the needle arts. These two knots are the square knot and the Half Hitch. The combination of these simple knots quickly becomes an awe inspiring display with amazing results.



Fig. 1.— Showing the thread
in a knot before it is drawn up.

The materials used for macrame' are quite simple: yarns, cord, rope, pins, measuring tape, pins, pinning board, rubber bands, glue, and crochet hook for occasional poking and twisting. This needle art certainly reminds one of the exceptional knot tying skills of sailors.

Rug Making

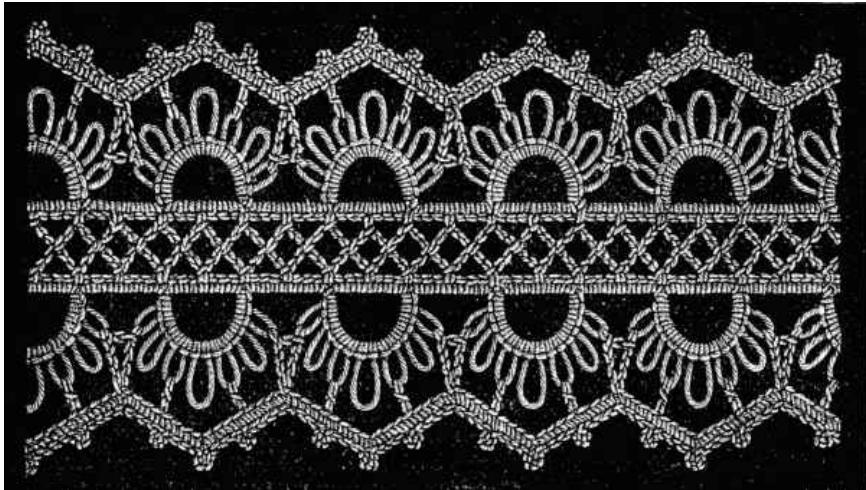
Rug making is an application needle art to a specific practical emphasis: making floor coverings. This art form taps many different skills and techniques including Braiding, Crochet, Embroidery, Hooking, Knitting, and Knotting. You are likely to have one of these art forms in your home right now. We have an embroidered rug in our family room. We also have a braided rug in our kitchen.





Tatting

Tatting is needlework using shuttle and thread to make loops and knots to create gorgeous lace. My grandmother was an expert at tatting. She would sit for hours creating the most delicate lace for table coverings, lace collars, and all manner of other lace items. I remember being awestruck at

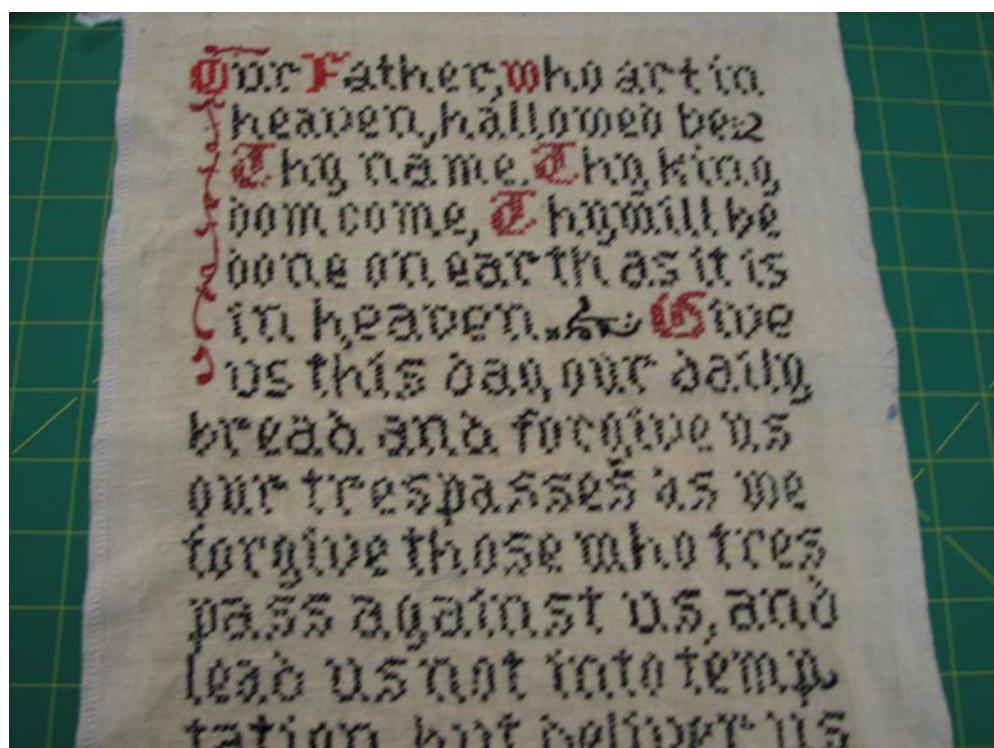


how complicated it all seemed. Later, I was assured that if you learn the basic stitch, everything else comes automatically.

Cross Stitch

Cross stitch is like embroidery in that it embellishes fabrics, but cross stitch uses special cloth calledida cloth with specific count weave. This fabric allows the cross stitch artist to create designs, drawings, and images with cross stitch.

Below are some samples of cross stitch completed by my grandmother and I many years ago. Today, cross stitch like most of the other needlework or hand sewing arts can be accomplished with ease using modern sewing machines.





WHEN YOU
WEIGH
THE FAULTS
OF OTHERS

DON'T PUT
YOUR THUMB
ON THE
SCALES



Hand Sewing And Hand Quilting

Perhaps the most versatile needle art is hand sewing and hand quilting. Not only does it offer highly practical applications, it also offers great beauty and decorative applications. Clothing construction and embellishment have long been a primary focus of hand sewing. Home decorating, pillows, soft furniture covers, draperies, and other projects have also been popular applications. Quilting is also a part of sewing in which fabrics are joined, layered, and quilted (sewn together).

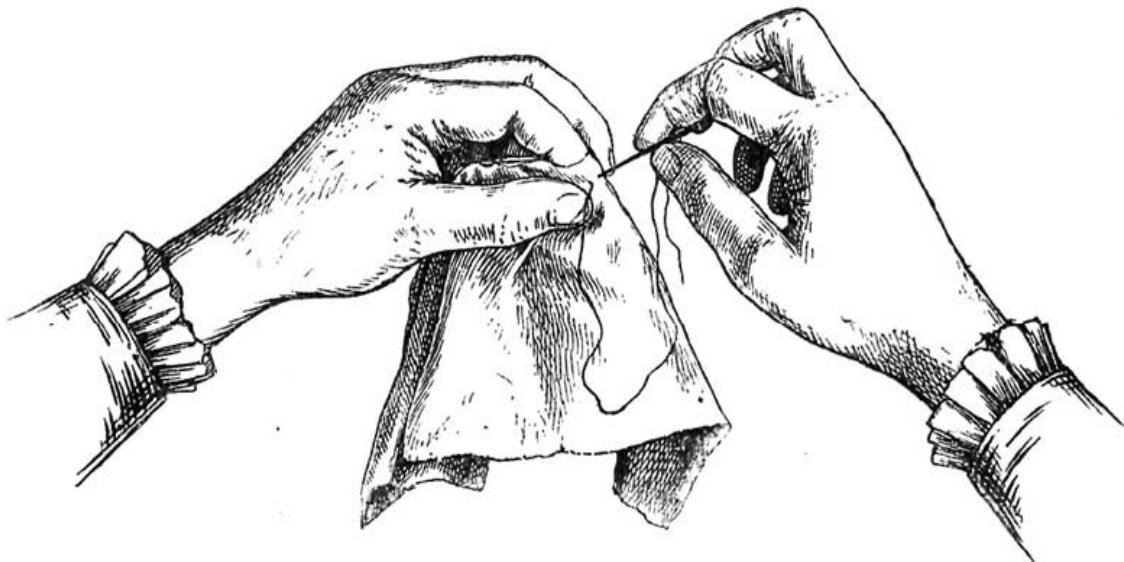


Fig. 6.—Showing the work and hands in position.

Hand sewing and hand quilting involve many special tools for cutting, layout, measuring, and stitching. Special hand sewing needles are used for hundreds of different stitches and their applications. Scissors, snips, and seam rippers are vital tools. Tape measures and rulers make measuring easy. Quilters find that quilt frames or wooden frames are useful for holding fabrics stable during the quilting process.

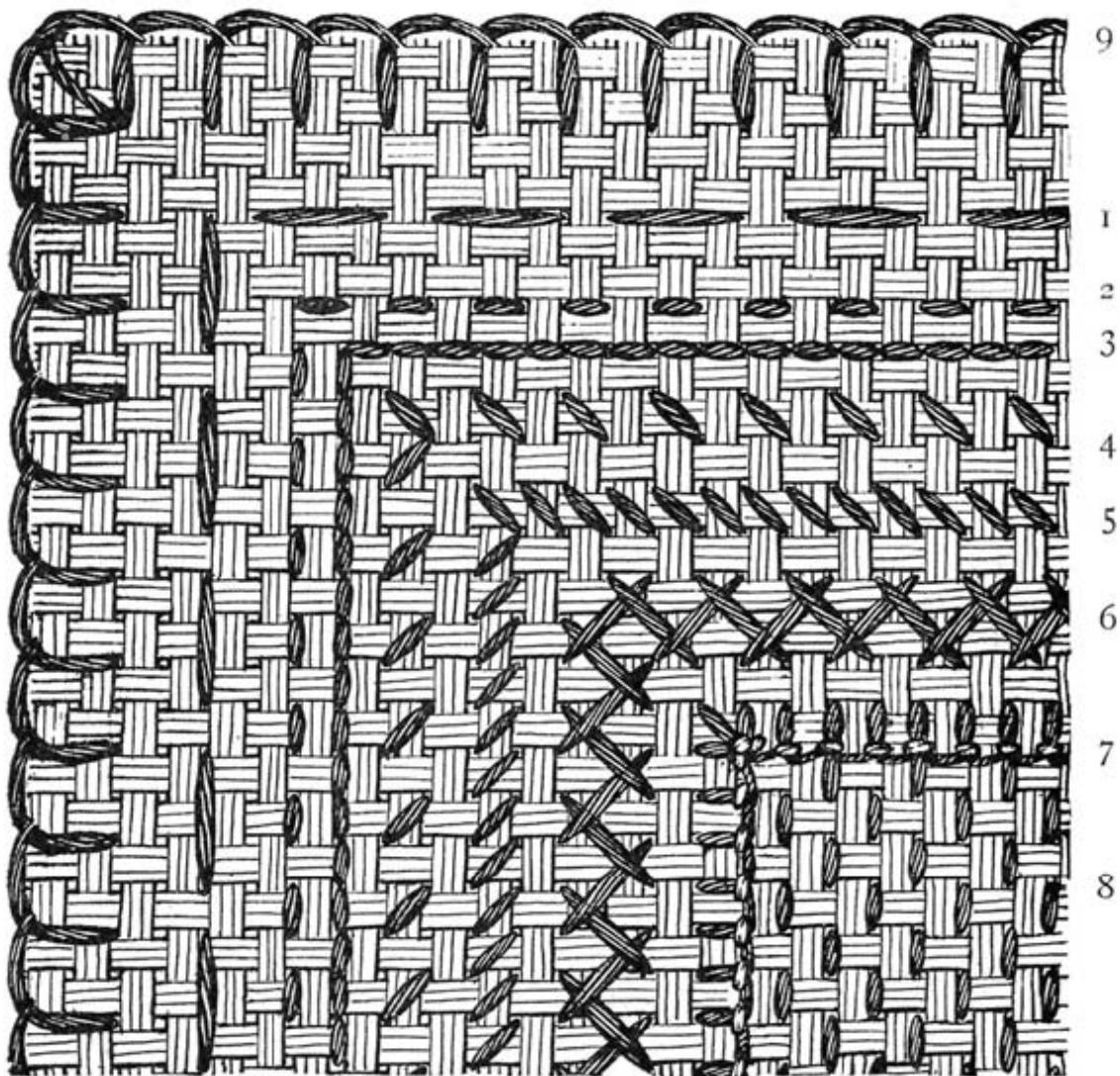


Fig. 10.— Showing different stitches taken on canvas.

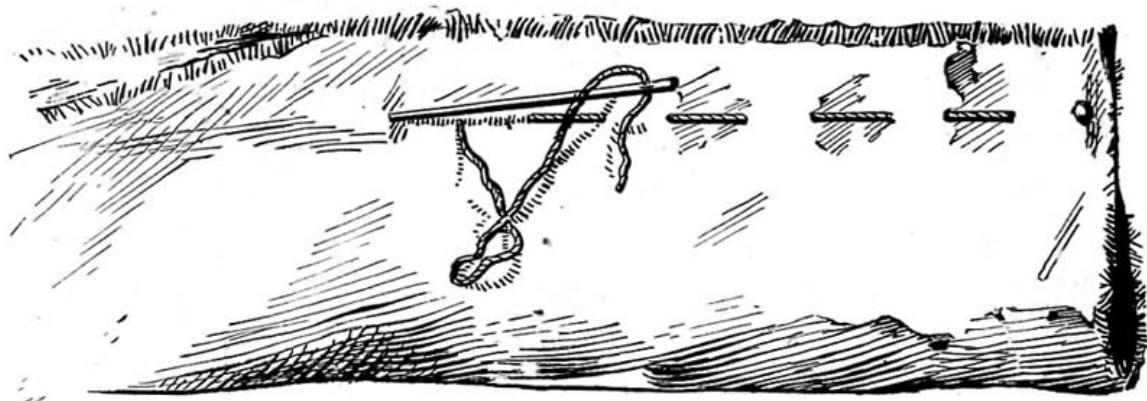


Fig. 12.— Showing even basting stitches, needle inserted.

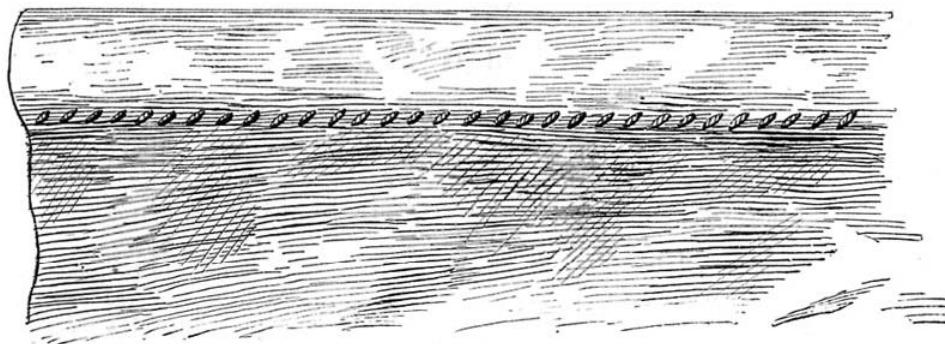


Fig. 19.— Showing the work as it looks on the right side.

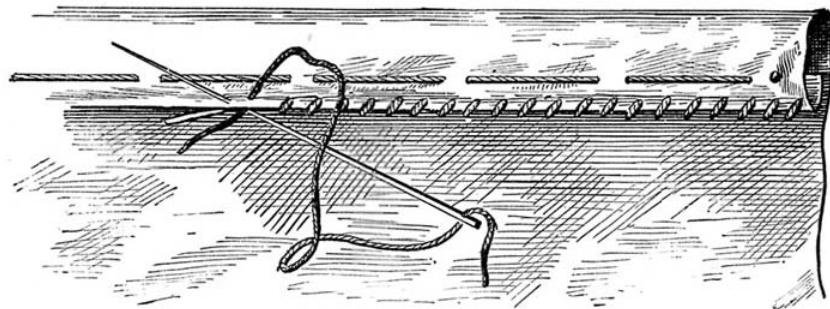


Fig. 20.— Showing the work as it looks on the wrong side; and how to join the thread, the double line representing the old thread, and the black line the new thread.

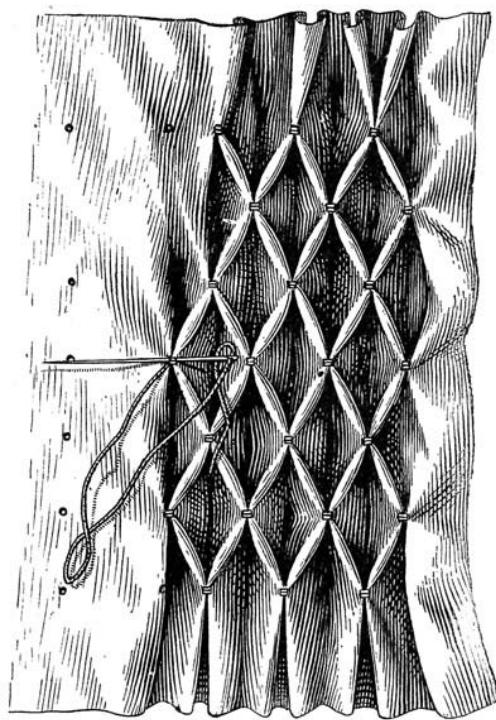


Fig. 36.— Showing diamond honey-combing.

All of these activities and traditional needle arts may be described as handwork or Hand Sewing Arts.



CHAPTER THREE

Machine Sewing Arts.

The focus of this book as well as Sewing Answers. Com is Machine Sewing Arts. From this point on, this book will detail, discuss, and illustrate the world's greatest hobby in terms of sewing and the machine sewing arts.

These include: Clothing Construction, Embellishment, Quilting, Heirloom Sewing, Home Décor, and Crafting. The common thread linking all of these needle arts is the sewing machine. Each of these areas of sewing arts uses the sewing machine in slightly different ways and apply it on different kinds of projects, but all of them use the sewing machine.

Sewing Machine Clothing Construction

Clothing Construction is the grandmother of all sewings, and includes use of hundreds of different stitches and techniques. The sewing machine is used to sew seams, hems, staystitching, understitching, and decorative applications.

Once clothing construction was considered an absolute necessity, but today it is part of the best hobby in the world. Yes, you can save money. Now you can make your own clothes so they truly fit and look good on you. Instead of paying a thousand dollars for a dress, you can make it for a couple hundred. Instead of having to wear the same thing everybody else is wearing, you can create your own fashion statement with a one of a kind, Wow!



The personal touch is yours to make. You can purchase ready made clothing which often do not fit, and make the alterations for perfect fit. You could have it

altered at seventy five to a hundred dollars, or do it yourself for free. Imagine buying a hundred dollar suit with a missing button, or poor fit for just a few dollars on clearance. You can quickly and easily turn that reject into a treasured suit. You can do it.

Heirloom Sewing

Heirloom Sewing involves decorative use of lace, trapunto, twin needles, and winged needles. The possibilities are fantastic. You can make beautiful treasures to be enjoyed generation after generation. Your sewing machine becomes a tool for heritage building.



Home Décor

Home Décor is sewing of window treatments, upholstery, and decorative items like table runners and wall hangings. A house is simple four walls ceilings and floors, but sewing home décor empowers you to make it a home where everyone will feel comfortable, relaxed, and at home.

This is the world's greatest hobby. It is not as much a matter of cost, you could hire a professional and pay thousands. But nobody can take away the feeling of pride you have when you know, you did it yourself.

You can make pillows, throws, wall hangings, table covers, afghans, Christmas tree skirts, curtains, draperies, window treatments, chair dresses, and more. You can make your home truly special.



Embellishment

Embellishment is sewing that enhances ordinary items such as Clothing and Home Décor items with Appliqué, Embroidery, And Special Thread Applications. Make ordinary things one of a kind spectacular. This is the world's greatest hobby. It is fun, easy, pride boosting, self expressing, and practical too.



Quilting

Quilting involves sewing multiple layers together. You can make quilts, blankets, garments, and wall hangings. You can make practical items to keep you warm or decorative items to bless the eyes. You can do simple piecing or elaborate long arm quilting. This is the world's greatest hobby.



Machine Cross Stitch

While many people associate cross stitch with hand sewing cross stitch, it is like the other hand sewing arts in that it can be achieved using modern sewing machines. Indeed, the amazing production of machine cross stitch is a great art form in itself. This is a sample of a cross stitch design sewing on my Baby Lock elegante.



Sewing Is The World's Greatest Hobby

What makes sewing such a great hobby?

- ✓ This is a hobby you can do.
- ✓ It is easy to learn. Classes are available at amazingly low costs from experts who have a real passion for sewing.
- ✓ There are loads of support and opportunities to share your hobby.
- ✓ It is inexpensive as hobbies go. For a few hundred dollars you can do amazing things. For a few thousand you can transform your world.
- ✓ Spending on your hobby will make huge savings over having a professional do the same job.
- ✓ Your hobby builds self confidence.
- ✓ Your hobby boosts your pride in yourself.
- ✓ Your hobby provides relaxing personal satisfaction.
- ✓ Your hobby gives practical solutions to everyday challenges.
- ✓ Your hobby is fun to do and fun to share.

- ✓ Your hobby sets you aside from the crowd making you truly special.
- ✓ Sewing is the greatest hobby in the world.
- ✓ The more time and resources you invest in your hobby the more pleasure, satisfaction, and profit you gain.

CHAPTER FOUR

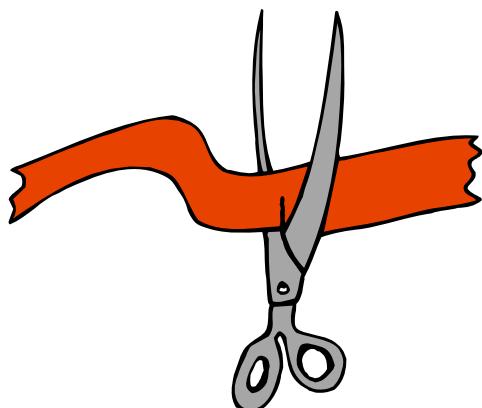
The Origins of Modern Sewing

The first inkling of progress toward a practical sewing machine is found in the patent record of Great Britain 1755A.D. by German inventor Charles Weisenthal. A brief reference to a needle to be made for an undefined mechanical device is our only clue, and no other subsequent reference is known for his device.



Thomas Saint filed a patent 1790 A.D. for a leather fastening device that would use an awl followed by needle and thread, but little came of his invention.

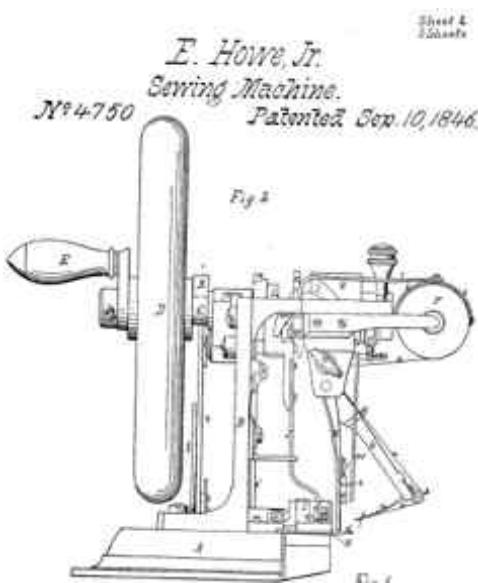
Like the race to outer space in recent years, a subtle race began. Germans, Austrians, and French inventors made many attempts to advance toward practical mechanical sewing. Barthelemy Thimonnier (1793-1857) of France made news with a mechanical chain stitch machine, but broad scale production and distribution

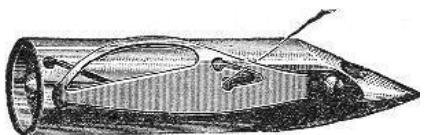
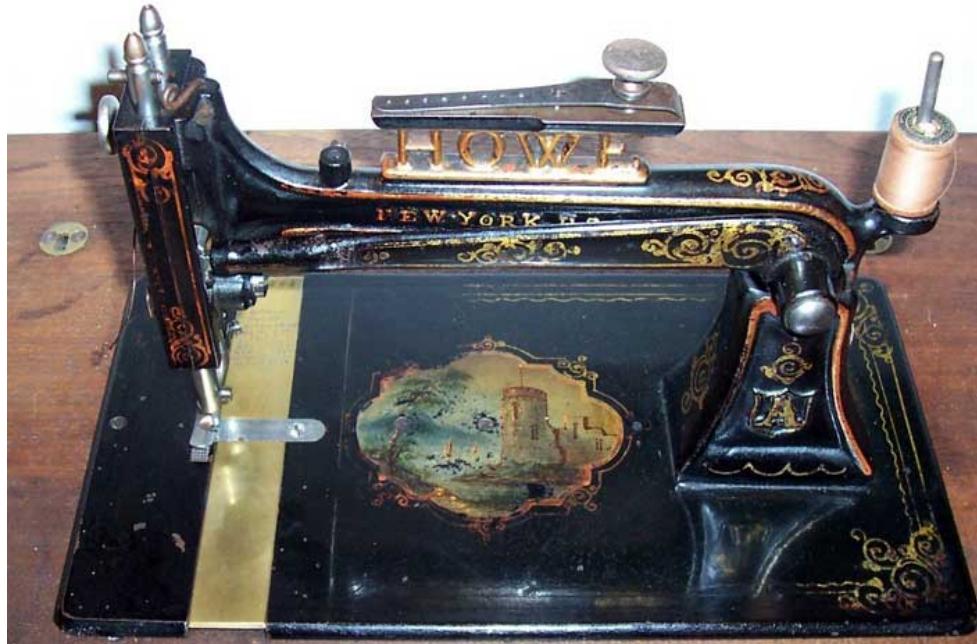


never emerged. Some inventors attempted to mimic hand sewing with their devices like Thomas Stone and James Henderson, Frenchmen who filed a patent in France in 1804. Failures seemed to be everywhere. One inventor after another attempted what was thought almost impossible by many only to see their futile attempts dash hopes again. John Knowles and John Doge were among the first Americans to attempt creation of the first sewing machine in 1818, but again failure.

ELIAS HOWE SEWING MACHINE

Elias Howe (1819-1867) created the first practical mechanical sewing machine in 1846 with a patent filed describing "a process that used thread from two different sources"... Top thread passed through a curved needle with an eye at the pointed end. The needle would pierce through the fabric, while another thread contained in a shuttle passed through and caught the first thread forming a locked stitch. Elias Howe had done it! His lockstitch machine could put out (250spm) as much as five speedy experienced hand sewers.

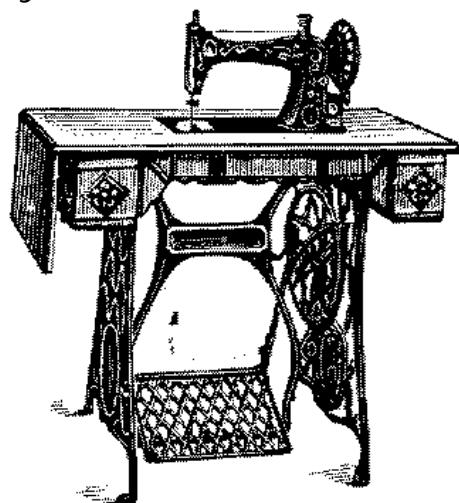




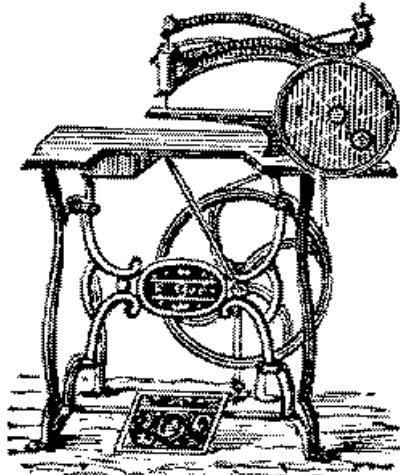
It was joked that Elias Howe was not actually the inventor of the sewing machine. Some said it was actually his wife. She got so upset with her husband that one day she made up her mind and in two hours invented the thing. Elias, however, filed the patent taking credit for everything. (ref. Russel Conwell, 1877) We will never know the truth, but difficulties marketing the device and struggles over patent rights drained the Howe family of even greater success.

Others were watching and adapting. Isaac Singer (1811-1875) invented a mechanism that moved up and down. Allen Wilson originated a rotary hook shuttle.

By 1850 the race to deliver a practical sewing machine to industry and the home entered mass production. Isaac Singer led the way with the first commercially successful sewing machine with moving needle (up/down) powered by a foot treadle device to produce



the same lockstitch designed by Howe. The famous foot treadle device was a huge advancement. Previous machines had all been hand crank machines.

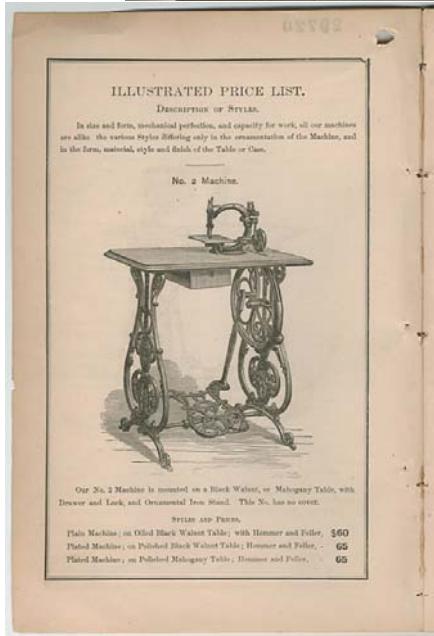


Walter Hunt
(1796-1860))

launched a lockstitch machine (1834) using two threads and an eye-pointed needle, but he never filed a patent. Elias Howe sued Hunt for patent infringement, and a panic among garment workers fearing

unemployment crushed Hunt's enthusiasm. Hunt abandoned his efforts and the patent pursuit.

Legal battles ensued over patent infringements. In spite of winning the court battle (1854), Elias Howe largely lost the marketing battle. Elias Howe marketed his machine earning an estimated two million dollars by the end of the Civil War.



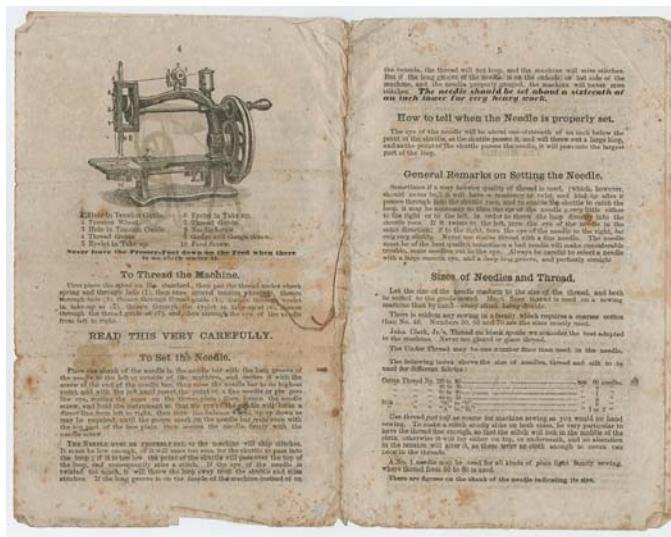
Singer continued to enhance and market his own version of the sewing machine. Singer became a household name, and even today remains the best known brand of sewing machines.

Communities were desperate to get their hands on this exciting new invention. When the average family income was only \$500 per year, the Singer machine cost \$125. Towns would join together pooling their resources to buy one machine for the whole town.

WILLCOX AND GIBBS SEWING MACHINES

In 1855, a price war broke out. A young farmer by the name of James Gibbs joined with James Willcox to create a lighter weight chain stitch machine with an iron frame and

treadle that sold for half (\$50) what the Singer model was selling. In 1856, the I.M. Singer Company offered a purchase plan with monthly installments and the sales tripled. Singer further responded in 1858 by producing an even less expensive model. The competition continued between I.M. Singer Company and the Willcox & Gibbs Sewing Machine Company for many years.



INVENTIVE WOMEN

Sewing machine development was not all male dominated. Helen Augusta (1840-1922) was famous for her machine improvements. She held 22 sewing machine patents including the revolutionary Zig Zag Sewing Machine. Her over-seaming machine was first manufactured in 1873.

The first sewing machines were commercial, and revolutionized the shoe and garment industries. Production skyrocketed and prices declined. On the negative side, wages also fell, demand for hand sewers disappeared. Working conditions became severe, and unemployment rampant. The problem became even worse with the advent of the electric motor and motorized sewing machines. Eventually the workers organized and government set work place standards.



Ellen Curtis Demorest (1824-1898) observed one of her servants cutting out a dress paper as guide. Inspired, Ellen Demorest launched the paper pattern industry so pervasive today. Her patterns were sold by hundreds of saleswomen and delivered through the mails.

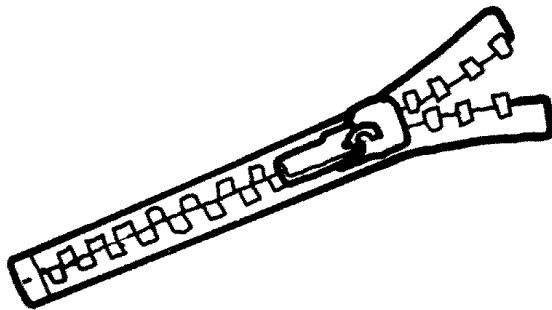
In the home, there was a different kind of revolution. In 1898 a home sewing machine was produced for home makers. By 1905 the electric sewing machine was highly popular. The sewing machine empowered the homemaker to

cut sewing and mending time by 90%. An hour of sewing meant a new dress, and an hour and a quarter meant a new shirt for her husband. It was like a miracle at home. Drudgery turned to creative wonders. The sewing machine became a valuable tool offering homemakers the opportunity to work from home. The sewing machine still provides the foundation for an ever expanding cottage industry world wide. What was at the turn of the century a luxury, by the mid twentieth century became a necessity for every home. Today sewing machine still provides the foundation for an ever expanding cottage industry world wide. Today sewing, quilting (with a sewing machine), heirloom sewing, home décor sewing, craft sewing are hobbies, a creative outlets, passions for millions of women and men the world over.

Gradually, the time saving wonder of the sewing machine was amplified by the electric washing machine, dryer, dishwasher, range, microwave, jet air ovens, mixers, blenders, all manner of kitchen appliances, and vacuum cleaners. With more time for things other than the

humdrum of cleaning and household chores, many women began to pursue creative outlets, education, and career opportunities outside the home.

Advancements in textiles and sewing continued full of invention and enhancement. Levi Strauss noticed the miners tended to chafe from their old pants, and produced denim jeans (1873). Mary Phelps Jacob under the pseudonym of Caresse Crosby patented the modern brassiere "Backless Brassier" Nov. 3, 1914. In 1863, Ellen Butterick launched the first graded (standard sized) paper sewing patterns. Elias Howe invented the "continuous clothing closure", but due to distractions failed to market it. In 1893, Whitcomb Judson became the inventor of the zipper by filing a patent for his "clasp locker". He joined Colonel Lewis Walker to form the Universal Fastener Company (1893) to market zippers which was introduced at Chicago World's Fair. In 1948, George de Mestral invented Velcro in 1955 (hook and loop) after observing cockle burrs.



SINGER SEWING MACHINES



From 1851, when Isaac Merritt Singer first formed the I.M Singer & Company, the Singer name has been at the forefront of sewing. With corporate office in New York City, Singer became an American giant of industry. The first machines sold for around \$100 (Expensive!) The machine won first prize at the World's Fair in 1855. The "hire-purchase plan" or credit payment plan improved sales dramatically. Over the years, Singer continued to improve and augment the sewing machine. From treadle, to ruffler, tucker and binder,



the "Grasshopper" (1858) home machine, added

the Edison electric motor (1880), and finally in 1889 introduced the first practical electric sewing machine. Singer introduced a commercial zig zag machine in 1892. In 1905, Singer acquired the Wheeler Wilson Sewing Machine Company continuing the evolution of the rise and fall of sewing machine companies. By 1929 nine manufacturing and distribution centers operated in New York, New Jersey, Illinois, Connecticut, Canada, England, and Russia employing over 27,000 people and making over 3,000 models.



Singer consistently dominated the world sewing machine market by eighty percent (80%). The Chicago World's Fair of 1933 saw the launch of the "Featherweight" sewing machine. During World War II sewing machine production was stopped in favor of war production. By 1951

Singer was again producing sewing machines. Singer launched a huge program to train about 400,000 women how to sew. In 1952, the home zig zag model 206 was introduced followed by the "Touch and Sew" (1065), world's first electronic machine Athena (1975), "Touchtronic 2001" (1978), "9900 Unlimited" and "Quantum®" (1990), and "Quantum® XL100" among the first sewing machine and embroidery sewing machine (1994).

In 1963, the company name was changed to "The Singer Company" and went public trading on the London Stock Exchange (1973). In 1988, Pfaff acquired majority interest in Singer's mother



company Semi-Tech (Global) Co. The merger was, however, short lived and Singer spun off in 1997. During recent years the company has been acquired by interests in China, Brazil, and elsewhere while ceasing production within the United States. Most Singer machines today are sold under \$300.00 and are considered by some to be disposable machines.



JONES SEWING MACHINES

The Jones brothers joined the rush to sewing machine millions producing their own excellent sewing machines. William Jones had been an engineer making small steam engines in England when he became interested in sewing machines activities of Howe and Wheeler & Wilson. He filed patents for improvements and worked with Thomas Chadwick 1860-63. The corporate battles took a toll on the Jones Company and his partner left to work with competing company. William and his brother John continued the Jones Company producing and marketing their sewing machines until 1958 when the Brother Company from Japan took over the Jones business. Today, Brother produces three lines of sewing machines: a cheap disposable line for mass merchandisers (including some machines sold under generic

names like Kenmore), a higher quality line under the "Pacesetter" label, and a line of commercial machines.



BROTHER SEWING MACHINES

Doing the impossible is the challenge undertaken by Kanekichi Yasui of Japan in 1908. Japan was considered by many to still be a product of ancient tradition and too underdeveloped technologically to produce their own sewing machines. Mr. Yasui was the father of ten children and a bold entrepreneur who began Yasui Sewing Machine Co. to sell and repair sewing machines, but his dream was to design and build a Japanese domestic sewing machine. He succeeded in 1928 with the successful development of a superior quality chain-stitch sewing machine called the "Sho-san-shiki" and marketed under the Brother® brand name. The name Brother® was actually an after thought when the

family discovered their preferred name (Sister) was already registered.

His sons Masayoshi and Jitsuichi Yasui followed their father's dream and developed their own sewing machine advances leading to the first Japanese sewing machine



1932. Soon the company built its own facilities and began mass production of Japanese sewing machines. Brother Sales, Ltd (1941) formally established a sales network in Japan and later Brother International expanded to Europe

and the Americas 1960. Like most sewing machine companies around the world, Brother ceased production of sewing machines during World War II, but resumed production in 1946. Soon the dream of exporting Japanese sewing machines became a reality.

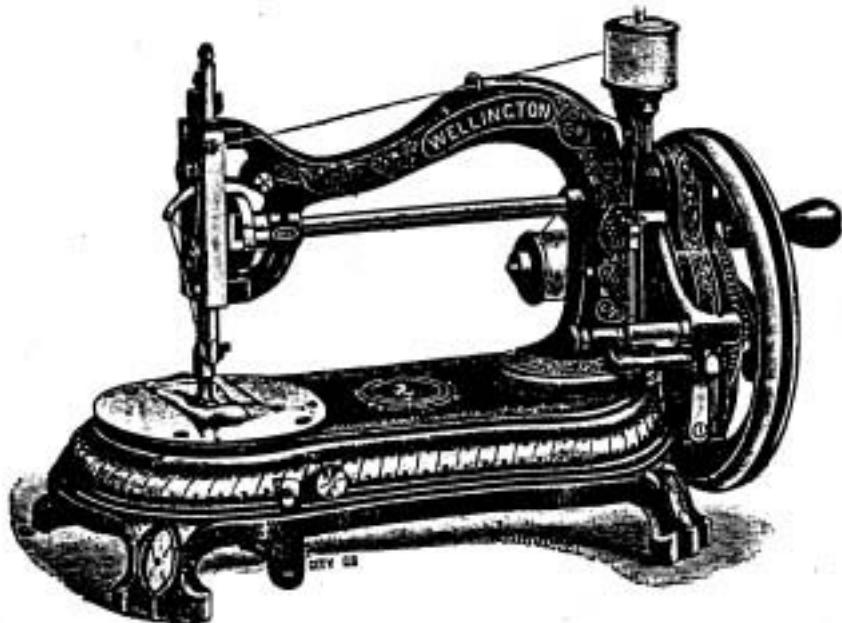


Brother International was a progressive company with a broad vision. During the 1960's the company expanded its design and production efforts into typewriters, which became its "flagship" product. Soon the company launched electronic sewing machines, typewriters, printers, fax machines, and an increasingly broad offering of leading technology products.

Today Brother International continues to produce sewing machines for the world. In the United States, Brother products fill the mass merchandisers shelves with low cost sewing machines, fax machines, and other products. A network of independent sewing machine dealers offer the leading sewing machine line called the "Pacesetter" by Brother.

BRADBURY SEWING MACHINES

The Bradbury & Co. Wellington Works (1852) rose to prominence in England as well. Manufacturing more machines than any other English company. Their Belgravia model was set a new standard for home sewing machines with the capability of making six different stitches. After Thomas Chadwick left the Jones Company in 1863, he became "Bradbury's right hand man." The Bradbury also copied Singer's Model 12 and even capitalized on the Singer reputation by calling his machine the "Family" the same marketing name used by Singer. The "Wellington" was a popular hand operated machine. During the 1920's Bradbury & Co. diversified into production of bicycles, motorcycles, mail carts, etc. They had such success with motor cycles that Bradbury became Bradbury Motors and sewing machine production faded.



WHITE SEWING MACHINES



Thomas White, originally a chair manufacturer, began producing sewing machines (a small palm sized 6" by 9") in 1866 at a cost of \$10. The company incorporated as White Sewing Machine. For several years the company focused on producing

braiding, cording, ruffling, and tucking attachments. In 1900, the company produced its full rotary system and began making sewing cabinets. During the 1930's the company launched its educational program "The Art of Sewing and Dress Creation" packaged free with the purchase of a White rotary electric sewing machine. Like other sewing machine manufacturers, it paused its production during World War II to produce war goods.



Following the war expansion included changing its company name to White Consolidated Industries and taking over other companies including: Kelvinator, Gibson, major-appliance division of Westinghouse Electric Corp., and others. In 1967, White launched a full electronic sewing machine. During the 1980's the company continued selling its full rotary electronic machines and introduced the Superlock which cut sewing time in half (seaming, trimming, and overcastting in one step). It also merged with Husqvarna Sewing Machine Co. a division of Electrolux to form VikingWhite Sewing Machines.

NECCHI SEWING MACHINE

The Italian sewing machine was known as the Necchi. During the 1920's Necchi mimicked Singer's models including model 15. Gradually, Necchi gained great status with its high standards and great innovations. In the 1950's the sewing world stood up and took notice with the introduction of the gold medal winning Necchi Supernova. The most beautiful women including Sophia Loren were used in its advertising campaigns. Today Allyn International markets the Necchi sewing machine line in the United States

offering a full line of mid-level and lower end sewing machines.



VIKING SEWING MACHINES

Husqvarna Viking has been manufacturing sewing machines since 1872. Earlier Husqvarna was a Swiss royal arms factory producing small guns and rifles for the military. During the 1870's the demand for guns was low, and the demand for sewing machines was high. The "Freda" (1883) was a huge step forward with gear drive and enclosed mechanical parts. During the first half of the twentieth century, Viking oscillating bobbin dominated the world sewing market. Husqvarna produced excellent zig zag, free arm, multi-stitch sewing machines, and numerous mechanical advances hidden from the user's view. In 1979, Model 6680 brought the computer sewing machine to reality. Husqvarna continues to produce quality sewing machines engineered in Switzerland today. In 1999, Viking acquired control over Pfaff.



PFAFF SEWING MACHINES

Georg Michael Pfaff, an instrument maker, joined the sewing machine world in 1862 with a steam driven drilling and milling production facilities producing sewing machines. Within ten years, he produced a thousand machines. Innovation and marketing combined for success. In 1910, Pfaff produced its one millionth machine. They introduced the first cam-controlled sewing machine. In 1988, Dr. Schuppi gained control of 52% of G.M. Pfaff AG and set out to acquire 72% interest in Semi-Tech (Global) Co. Ltd. (owner of Singer). The marketing department was reorganized on a local area concept. Conflict between Pfaff and Singer led to separation of the companies in 1997. In 1999, Pfaff sold its interests in home sewing machines to Swedish Husqvarna Viking. Pfaff continues to focus on its industrial sewing and welding technologies.



NEW HOME SEWING MACHINES

William Barker and Andrew Clark formed Gold Medal Sewing Machine Company in Cleveland, Ohio, and began selling sewing machines in 1867. During the late 1880's, the company produced two lines of sewing machines National and New Home. Around the turn of the century, the company expanded to make needles, sewing cabinets, and various accessories. During the 1920's and 30's, the company struggled and faltered financially. In 1960, the company was purchased by Janome Sewing Machine Company of Tokyo, Japan.

JANOME SEWING MACHINES

Yosaku Ose founded Janome ("eye of the snake") to manufacture sewing machines in the 1920's. They used the class fifteen metal bobbin system instead of the long shuttle of



Intricate designs were patented on this model, May 20, 1884.
— Smithsonian photo



machines branded by other Kenmore. It launched the first programmable sewing machine (1997), and continues to lead in technological advancements. The Memory Craft series includes its most recent advancement with Memory Craft 11000. This amazing sewing machine boasts the largest square embroidery sewing field on the market and has an automatically repositioning LCD control screed. Today Janome is a dominant



other machines. After World War II, the company continued to thrive gradually becoming the world's largest manufacturer of sewing machines. Not only did it make its own brand lines, it produced millions of generic companies like Sears brand

the first programmable sewing

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brand and delivers a full range of sewing machines.

BERNINA SEWING MACHINES



Fritz Gegauf opened an embroidery shop and workshop in Steckborn, Switzerland intending to produce a monogram machine he had designed. While his employees gave their attention to operation of the embroidery shop, Fritz focused on designing a wide range of new machines. He built the world's first hemstitching machine in 1892 gaining a Swiss patent for his machine. He and his son continually expanded the operations. Following a devastating fire in 1895, they rebuilt and immediately expanded their operations. All went well until 1917, when World War I broke out and production of sewing machines all but ended. No foreign exports were permitted.

Then tragedy struck, Georg Gegauf (commercial director for the company) died. After some period of struggle, Karl's son Fritz picked up the company banner with a new hemstitch patent (1919). New textiles did not work well on the hemstitch machine, so Karl Friedrich invented his "fitzmachines" only to die before their implementation. Sons Fritz and Gustav continued the company business launching new machines in 1927 and 1929. The current factory site began operations April 5, 1929. Hemstitch machines faded in popularity, and the Gegauf family launched new domestic sewing machines in 1932.



In 1954, Bernina produced their one millionth sewing machine. The best selling models were the 830 (1971-1981), 930 (1981), and 1130 (1986). Bernina came to be known for its superior engineering, advanced electronic features, fully automatic button hole, and overall quality. "Activa" and "Virtuosa" models brought a new generation of sewing computers. The advent of the "Artisa" in 1997, brought a whole new level of sewing and embroidery computer machines. Flood raged through the Bernina factory in 2000, but Bernina rose above the calamity with new models introduced in 2003 and 2005.



Today, Bernina offers a fabulous line of machines: Artista 730, 640, 630, 440, and 430. Bernina is the "Cadillac" of the sewing world with advanced features, flawless stitching, BSR free motion stitch regulator, great embroidery, and more.

RICCAR SEWING MACHINES

In 1839, The Riccar Sewing Machine Company was founded by Nippon Shokusan Kogyo to manufacture the Riccar Sewing Machines. The Japanese company launched Riccar America in 1964. In 1970, it produced a free-arm sewing machine and in 1976 produced Japan's first electric sewing machine.



Daiei of Japan purchased the

Riccar Company in 1985 and during the late 1990's its American rights were acquired by Tacony Corporation.

BABY LOCK SERGERS & SEWING MACHINES



Tokyo Juki Industrial Company managers got inspiration for producing a home version of the industrial over locker in 1964. They resigned from Juki to form Baby Lock, and produce the world's first domestic overlocker. Continued development has led to amazing technical advances in the home serger and sewing machine including Jet Air Threading, Automatic Thread Delivery System, and superior stitch quality. "Baby Lock is the genuine original and still the best." Today, the Baby Lock Imagine and Evolve Wave (87 stitches) sergers offer features far beyond the capability of any current competitor. Its line of computer machines including the Crafter's Choice, Decorator's Choice, Quilter's Choice, and Ellure are amazing mid line sewing machines. The combination sewing machines and embroidery machines (Esante, Ellageo, and



Elegante) are the current state of the art and priced very competitively. The sewing machine line is produced with the tightest quality control and engineering oversight on any sewing machine in the industry. Baby Lock America, is part of the Tacony Corporation family of sewing machine companies and works with Brother International's production facilities to deliver easiest to use, easiest to learn, the best machines, at the best prices, and with the finest support available anywhere.



ELNA SEWING MACHINES

Dr. Ramon Casas, a refugee of the Spanish Civil War in 1930's brought his designs for a new sewing machine to S.A. Tavaró in Geneva, Switzerland. Tavaró had already been producing an ironing press, and together they produced the Elna #1 in 1940. It was an amazing machine. It was the first compact, portable, electric, free arm sewing machine. They enjoyed



huge success with the production and sale of home sewing machines. Elna sewing machines were famous for quality, ease of use, design elegance, and reliability. In 1986, Elna founded an American subsidiary and business blossomed. Tacony Corporation acquired American distribution rights in 1996, and was operated as one of Tacony Corporation's family of sewing machine companies until 2006. Recently, the Elna line of machines with Swiss engineering and Japanese manufacturing (Janome production) has reorganized their company and is offering a great line up.



GENERIC SEWING MACHINES

Over the years many mass merchandisers have branded their own sewing machines and placed their store brand on them. Montgomery Wards and Sears And Roebuck, Co. are two of the giants in this category. They have contracted with many different manufacturers to produce their branded version. They might have a contract with Janome or Brother or another company. The company works with the merchandiser to repackaging models already

out of production or versions of a current production model under the branded name.



Sears sells their machines under the name Kenmore® and the now defunct Montgomery Wards machines were marketed under the name Wards®. In addition to these large mass merchandisers, other marketing companies have done similarly. Brand names like Dressmaker and Domestic were made by many different manufacturers and marketed under these brand names. Today, Allyn International markets sewing machines under the historic name of Necchi, but the machines are being produced in numerous locations around the world with various manufacturers.

TACONY SEWING CENTRAL

Tacony Sewing Central is a most influential marketing and support company. Baby Lock USA; Elna USA; Nancy's Notions; Riccar America Company; Simplicity Sewing Machines, Blakeman's Floor Care Parts & Equipment; CFR

Corporation; and Regency Ceiling Fans are the principal subsidiaries of Tacony Corporation making Tacony a giant on the American sewing machine stage.

Over these past one hundred sixty years, a revolution in textiles, garment construction, and economy. It has been marked by amazing invention, competition, and creativity. During this time over 250 different sewing machine companies have produced and marketed machines. Only a few of these remain. We seldom hear mention today of the Bartlett, Bradberry, Empire, J.W. Greene, H.G. Hawley, Walcott, Wilson, Jones, or Willcox sewing machines. These and hundreds of other sewing machine manufacturers are history.

Today, the modern sewing machine is a wonder of technology and convenience. While the sewing machine used to make work faster and easier; today the modern sewing machine makes sewing a great joy and passion of creative expression.

The major brands today include Janome, Bernina, Baby Lock, Singer, Elna, Pfaff, and Viking. Sears still markets generic machines under the name Kenmore. Walmart, Target, Hancock Fabrics, and other mass merchandisers market low end models which in many cases may be considered disposable machines.

CHOOSE THE RIGHT SEWING MACHINE FOR YOU

Remember your grandmother's old sewing machine. It performed miracles in her day. Think of those Hand Crank or Treadle machines. A little work and wow. Nostalgia is a wonderful way to remember those "good old days".

Today things are very different. Sewing used to be work, now it is fun and relaxing. With the right machine, you can easily and quickly create treasured beauty.

CHAPTER FIVE

THE SEWING MACHINE

THE MODERN SEWING MACHINE



Sewing is as old as the hills. Since the first animal skin wrap, people have tied, knotted, twisted, fastened, and sewn materials together to make clothing, shelter, and all manner of other practical items. Archaeologists have found crude bone needles in some of the oldest excavations.

For thousands of years, every stitch was sewn by hand. Many different kinds, sizes, and shapes of needles were used, but they all depended on manual labor to form the stitches.

In 1886, a man by the name of Elias Howe patented the first truly practical sewing machine. It looked strange by today's standards, but it worked. Indeed, it would produce as many stitches as five expert hand sewers, and it never got tired.

As part of the industrial revolution, the sewing machine became a vital tool of production. Unlike many machines used in big factories, however, the sewing machine became a hit with cottage industry and the home. By the mid 1980's, the sewing machine became a must have appliance for the home.

For over 100 years, the sewing machine with a single stitch capability dominated the market. Not until 1950, was the first home zig zag machine first introduced.

Since then, almost yearly, sewing machine companies have introduced amazing new innovations. Wonderful convenience features, smoother operations, greater dependability, and hundreds of new stitch capabilities. Some current models boast over 1,000 stitches with up to 9 millimeter stitch width and long long basting stitches. It is truly amazing how the sewing machine has developed.

With the arrival of the modern sewing machine, sewing itself has undergone huge changes. What use to be difficult sweat producing work fraught with endless frustrations, has evolved into the world's greatest hobby. Sewing today is filled with amazing possibilities and almost unlimited potential for creative expression.

At the heart of modern sewing is the sewing machine. Yes, you can use old even antique sewing machines for some things, but the modern sewing machine empowers you to do so much more, easier, faster, and with greater possibilities.

If you are content only doing the minimum straight stitching, then a solid straight stitch machine will do fine.

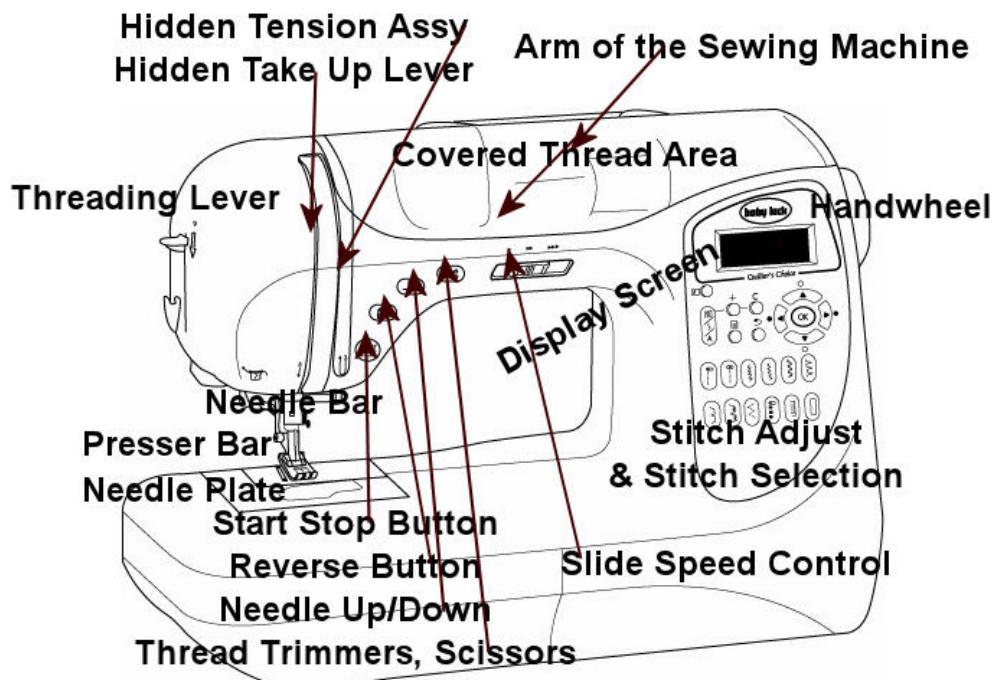
If, however, you dream of something more, you will need a good full featured sewing machine. While this course teaches many things you can do on a very basic sewing machine, you will find it much more enjoyable if you have a good dependable full featured machine.

THE PARTS OF YOUR SEWING MACHINE



While there are thousands of different sewing machine models, they all have basically the same parts depending on their complexity. Here are two examples. The first is an 1185 mechanical machine, and the second is a modern computerized electronic machine.

Be sure you can locate the following parts on your sewing machine: Upper Arm, Body, Bed, Hand Wheel, Upper Thread Spool, Stitch adjusting mechanisms, tension adjustments, Needle bar, presserfoot, bobbin, bobbin carrier, and hook.



THE OIL HOLE marked in a Dotted Circle is behind the Head of the Machine, and must be oiled OFTEN whilst Needle Bar is at its highest point. TAKE COVER OFF BACK OF TOP ARM to oil Feed Regulator.

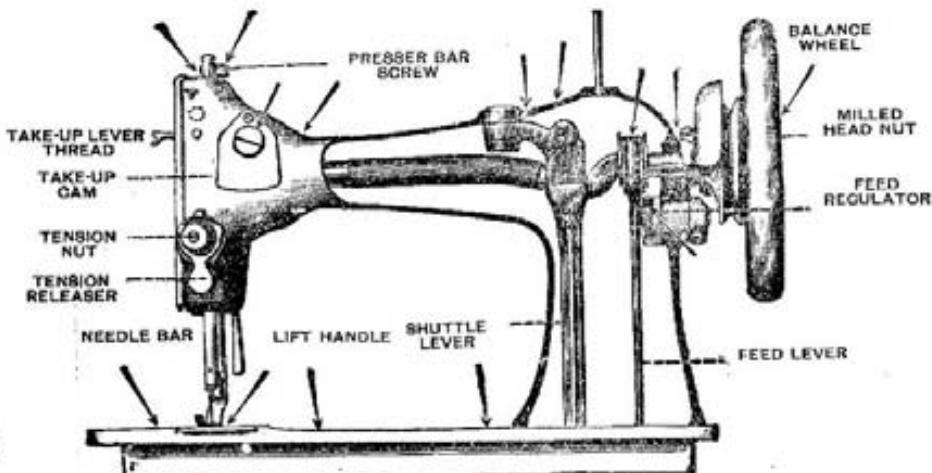


Fig. 1.

Be sure and Oil the Cotton in the Hole under Front Shuttle-race Slide.
The Arrows show where the Machine is to be Oiled.

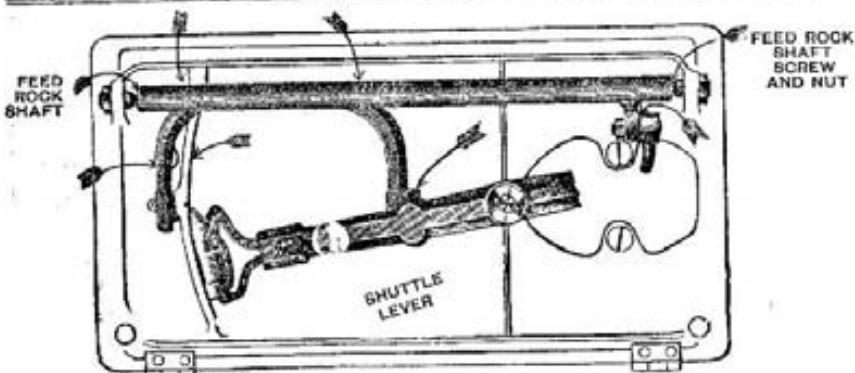
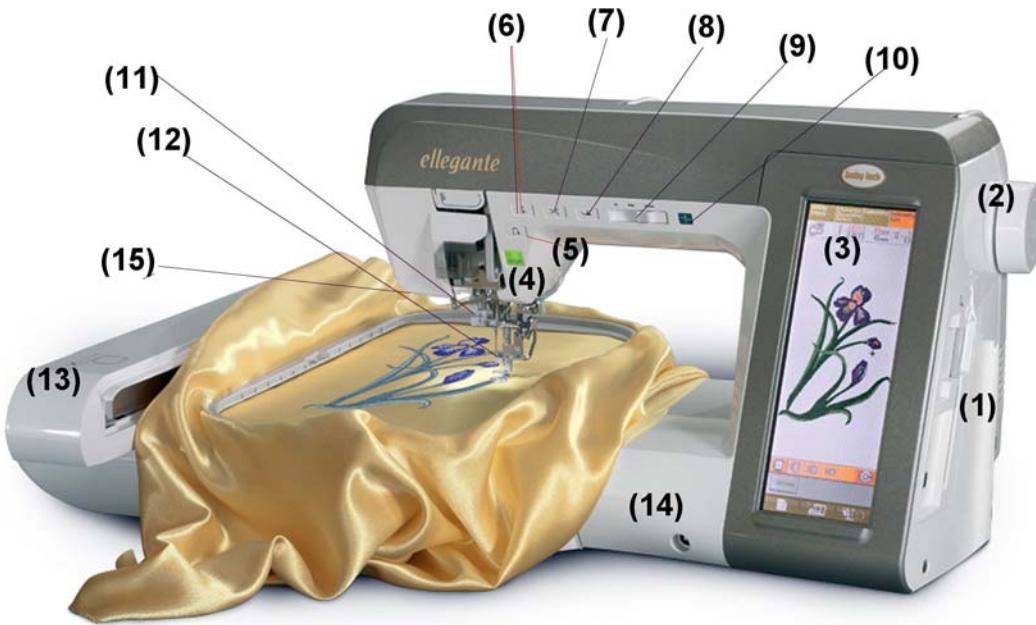


Fig. 2.

The Arrows show where the Machine is to be Oiled.

It is cheapest to use the **BEST SPERM OIL ONLY**. If the Machine or Stand runs heavy after standing, use Paraffin Oil, run the Machine at a quick speed for a few minutes, then clean the Paraffin Oil off and oil the Machine well with good Sperm Oil.



On this modern Baby Lock sewing machine, begin by noticing the upper arm with the various buttons across it, the body of the machine with the full color display, and the bed of the machine with the embroidery unit attached. Also note the upper threading is covered by a decorative cover. Proceeding numerically through the special features of this machine:

1. Memory Processing Center
2. Hand Wheel
3. On Screen Full Color Editing
4. Start Stop Button
5. Reverse button and Anchoring
6. Needle Up/Down
7. Scissors or thread cutters
8. Presser Foot Control Button
9. Slide Speed Control
10. Automatic Threading Button
11. Automatic Threading Mechanism
12. Needle Bar and Presser Foot
13. Embroidery Arm
14. Hands Free Knee Lift

Since this is a fully computerized sewing machine, the stitch selection, editing, adjusting, and manipulation are done through the on screen editing panel.

Examine your sewing machine. Read your sewing machine manual. Be thoroughly familiar with its parts and operation.

The Home Serger

Much like the sewing machine, the home serger is a vital tool for sewing. The serger is designed to seam, overcast the edge, and trim the fabric all in a single pass at about twice the sewing speed of a standards home sewing machine. The serger may sew with 2,3,4,5,6,7, or 8 threads depending on the design and features of the machine. Some have free arm capabilities and some do not. Most have differential feed. The serger does a great job finishing seams, edging, and speeding up the sewing process. Sergers may have 1, 2, 3, 4, or 5 needles, a lower and an upper looper, and other gadgets depending on the design of the specific model.

Typical challenges with sergers have been problems with threading, irregular tensions, and a tendency for the loopers to go out of time. In 1964 the Baby Lock brand introduced the very first home serger, and they continue to produce the most advanced models with many convenience features including: jet air threading, thread feed systems that eliminate traditional hassles with tensions, and protection against loopers going out of time.





HOW YOUR SEWING MACHINE WORKS



But, have you ever wondered exactly how does your sewing machine work? What happens when you press the foot control – inside the sewing machine? What happens when you select a stitch – inside the sewing machine?

How do stitches form? If we base our understanding on experience with hand sewing, we may become terribly confused. In hand sewing, we typically use only one thread, but a sewing machine uses a thread on top and on the bottom. The stitches are made very differently, but how?

How does the machine know when to lower the needle or move the thread? What keeps the stitches balanced and dependable stitch after stitch? How does the thread on top of the machine relate to the thread in the bobbin? How does the sewing machine make the fabric move the way it is suppose to?

If you think about it, you may even come up with more questions about how your sewing machine really works.

The goal of the sewing machine is to make stitches. A sewing machine might even be defined as a machine that joins layers of fabric together using two threads to form a set of lockstitches or sewing machine stitches in a line.



First, as you look at your sewing machine, notice that there is a place for thread on top of the machine and a place to put thread under the sewing surface of the machine.

The upper thread is drawn through some thread guides to a mechanism called tension or upper tension assembly. Then the thread goes through a little spring next to the tension, on up to the little lever on the front of the machine that is called the take up lever. Finally, the upper thread is drawn down and threaded through the eye of the needle.

The lower thread is wound on a bobbin and placed into a bobbin carrier. The carrier is placed into the sewing machine. (There are a few different types or ways this is done that we will discuss later.)



If you roll the hand wheel of the sewing machine (located on the far right side) forward, you will see that the needle begins to move down actually sinking below the metal plate we call the "needle plate". Hold the thread that was threaded through the eye of the needle in your left hand while continuing to roll the hand wheel forward. The needle keeps going down and then starts back up. Keep rolling the hand wheel until the needle is at its highest position. Now pull the thread with your left hand and look under the needle. There is another thread peaking up above the needle plate. Grab hold of the thread and pull out three or four inches of it. This is the lower or bobbin thread.



Now lower the needle again until it is just above the needle plate. Take a permanent marker and make a mark on the upper thread just below the casing of the sewing machine. Hold both threads in your left hand. Place a piece of scrap fabric under the presser foot and needle. Watch your mark on the thread very closely as you use your foot pedal to sew several stitches. What do you see?

Isn't that peculiar? The mark on the thread moves down, and then back up. It repeats this pattern several times before finally disappearing into the stitches on the fabric. Why?

The way a sewing machine makes a stitch is quite amazing. When the upper thread is fed under the needle plate by the needle we can't actually see what happens, but a device called a hook slides behind the needle and grabs the back of our upper thread. The hook pulls the upper thread around the bobbin wrapping it around the lower thread. Then the needle moves up again tightening the threads together as a stitch inside the fabric. This process is repeated many times using just a little thread at a time until a whole line of stitches is formed.

There are two basic hook assembly systems: Rotary and Oscillating Hook assemblies.

The Rotary Hook Assembly includes a hook that moves in a complete circle round and round. The hook slides behind the needle and proceeds all the way around the bobbin carrier until it again slides behind the bobbin carrier.



When you look at a sewing machine, look for where the bobbin is inserted into the sewing machine. If the bobbin is a top loading bobbin (one placed just below the needle plate and a slight bit in front of it), it is usually a rotary hook. If the bobbin is inserted in the left end of the sewing machine arm or on the face of the sewing machine arm, it may be either a rotary or oscillating hook.

How can you tell which you have? While watching the place where you insert your bobbin, turn the hand wheel toward you and watch the hook (metal piece just outside of your bobbin carrier) as it turns. Does it go all the way around as a rotary does, or does it go part way and retrace its path to start over as an oscillating machine does?

The Oscillating Hook Assembly involves a hook that begins a few millimeters to the top left and moves to the right sliding behind the needle and past it around to the bottom of the swing. Then the hook travels back again the same way to its original position for a return oscillation.



In the case of the rotary hook and in the case of the oscillating hook machines, the stitch formation remains essentially the same. Thread from the top is picked up by the hook, and wrapped around the bobbin thread, and finally pulled to form the stitch.

All stitches begin as straight stitches, but if you add length to a stitch it becomes a basting stitch. If you add width to a straight stitch it becomes a zig zag stitch. If you move the fabric back and forth while you sew, you create a reinforced stitch. Thus controlling the length and width of stitches while also controlling the feed system gives the machine tremendous variety in the stitches it can create.

CARE AND FEEDING OF YOUR SEWING MACHINE



There are literally thousands of different models of sewing machines. They vary from very limited to highly advanced

sewing technologies. You may never have used a sewing machine, or you may already be expert with your machine. Each sewing machine has its own set of features, ways to adjust, and little quirks to consider. Regardless, what sewing machine you currently have, the first and most important consideration is how to get it working, keep it working, and insure carefree sewing.

So, How do you set up your sewing machine?

You may have a sewing cabinet or simply use a kitchen table. In either case, when you pick up your machine, be very careful. Even the smallest sewing machine can be heavier and more awkward to carry than you might first expect.

To pick up your sewing machine, look for a handle on the top of the machine. If it has one, use one hand to lift the machine, while using the other hand under the front of the machine to stabilize it. If it is too heavy for your to lift comfortably, find someone stronger to help.

If your machine does not have a handle, reach one hand over the top of the machine and down behind the upper arm of the machine. Reach your fingers under the upper arm of the machine making it into a (rather large) handle. Use your other hand under the front of the machine to lift it. Always keep in mind, the sewing machine can be awkward to carry even if it is not too heavy. Take precautions to insure you do not drop the machine or hurt yourself while carrying it.

Set Up you machine on the table or cabinet. Inspect the power cord for any possible problems. Frayed or otherwise power cords can be very dangerous. Also attach the foot control. Plug them in and turn on the sewing machine. The sewing machine light should light up. If you gently push on your foot control, the machine should begin to move the needle bar up and down. If it appears sluggish or slow, take

hold of your hand wheel and turn it toward you. Do you feel considerable resistance? If so, you may have a problem. This may be resolved by cleaning out the bobbin area or by having the machine serviced by your local sewing machine repair center.

Keep the surface of the machine clean at all times. Cover it with a quilted cloth sewing machine cover to protect against sunlight, moisture, dust, etc. Hard covers protect well against the slight bump. Plastic covers protect against dust, but quilted cloth covers protect the best. Avoid clutter around your sewing machine.

How do you clean the bobbin area?

Remove the needle and presser foot (optional). Just below the presser foot is a metal plate called the needle plate because the needle rises and falls through a hole in the plate. Remove the needle plate by removing the screws on top.

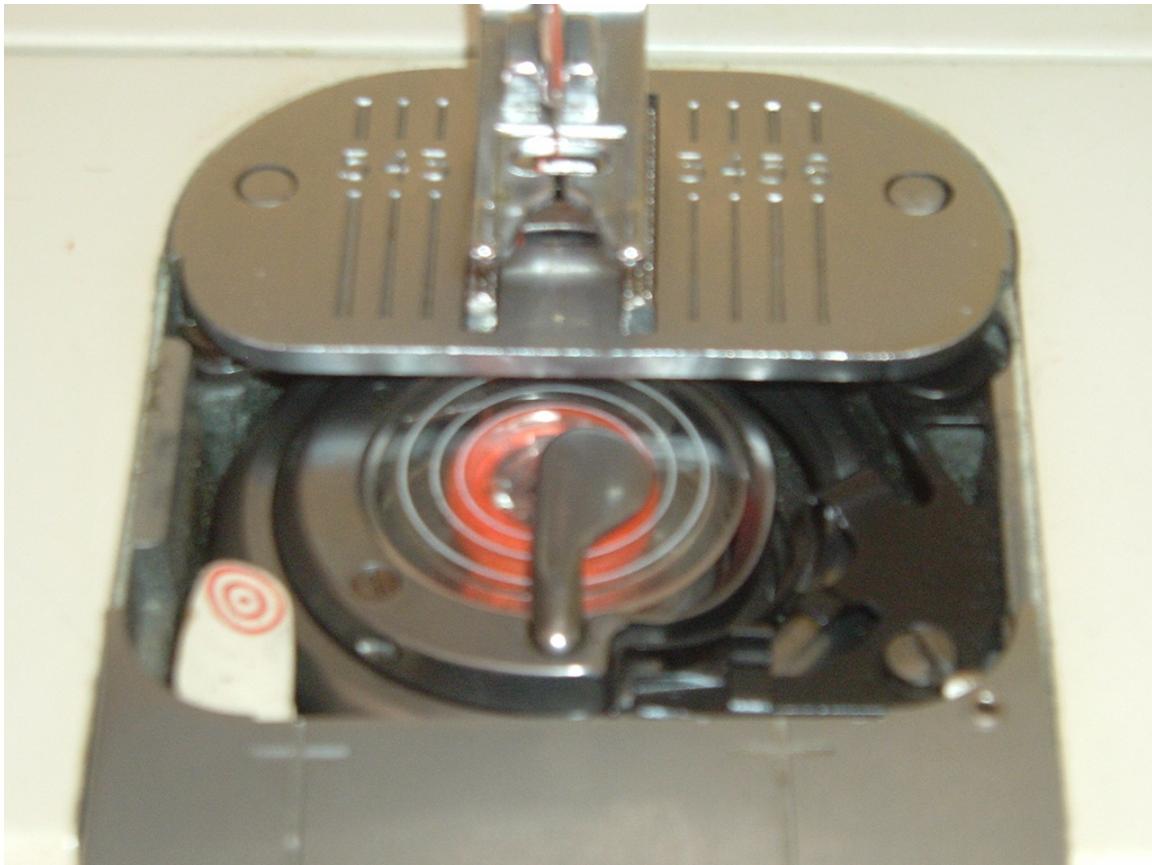
In some machines the bobbin is inserted from the top into a carrier just in front of the needle. Removing the needle plate and cover plate (if it has one), will expose the bobbin area.

In some machines the bobbin is inserted from the front or left end of the machine. A small door covers the bobbin area. The bobbin is normally contained in a carrier that is inserted here.

Remove the bobbin from the carrier. It just comes out.

Remove the carrier from the machine. Front loading and side loading machine carriers usually have a little lever on the front of the carrier. Pull the lever back and the carrier

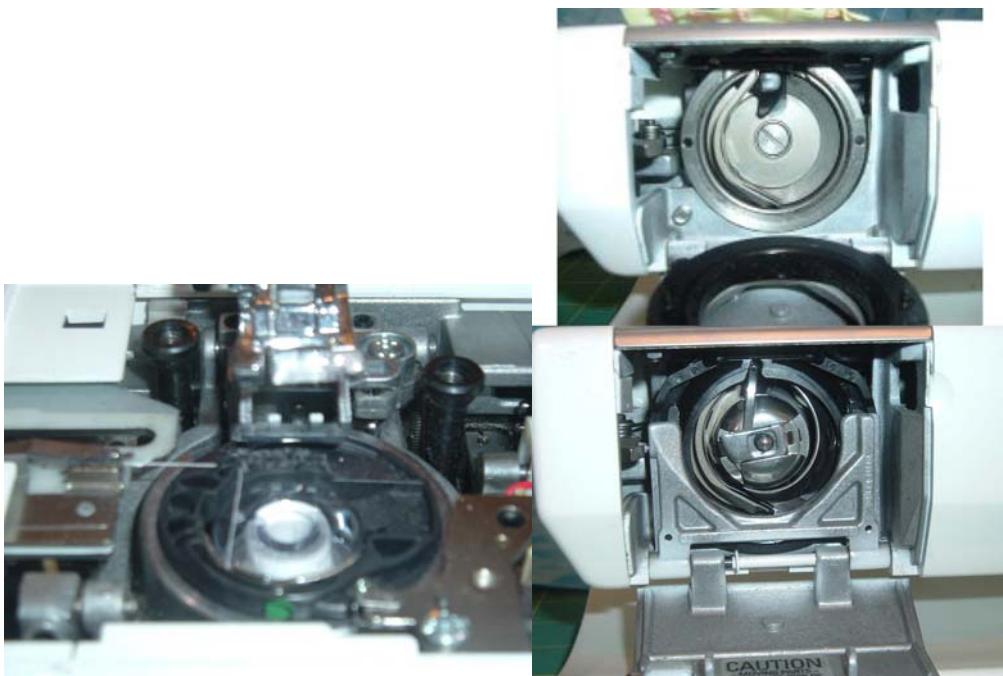
removes quite easily. Top loading bobbins just slip out once the face plate is removed.



Look for lint or other debris. Notice where the feed dogs are and how they make contact. This is an important area where lint often collects and for best sewing, it needs to be kept clean. The feed dogs should not have "felt pads" between their teeth. Clean out all this debris. To do so, use a small brush to loosen any solid debris. Use a vacuum with special attachment to vacuum out the area, or use a can of compressed air, "Blow Off", to blow out the area. If you use compressed air, avoid tilting the can. When the can is tilted, moisture inside the can sprays out with the air getting into your machine. Moisture in sewing machine is a bad thing. Look for threads that may have gotten caught or wrapped inside the bobbin area and remove them with tweezers.

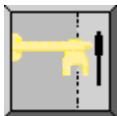
Notice the carrier sits inside groove or "race" that turns around it. This is the sewing machine hook assembly. If

you look closely, as you turn the hand wheel toward you, you will see a sharp prong or hook with a point on it. This hook moves around the bobbin. It picks up the thread from the needle, and forms a stitch with the bobbin thread. Some machines use rotary hook systems in which the hook moves continuously around the bobbin. Other machines use an oscillating system where the hook moves around the bobbin and then moves back to its start point for another oscillation.



Inspect the bobbin, carrier, hook, and other parts for any sign of excessive wear, rust, thread scoring, knicks, rough spots, needle pricks, etc. If you see any of these, you may need to take your machine to your local sewing machine technician and have the parts buffed, ground, treated, or replaced. Avoid problems before they become extreme.

This raceway or area where the hook moves around the carrier is where you will need to keep one drop of oil periodically. Do not over oil. This hook moves around the carrier when the needle comes down the thread from a loop on the back side of the needle. The hook grabs this thread, wraps it around the bobbin thread to form the stitch.



ESSENTIAL MAINTANENCE: Keep the surface of the machine clean at all times. Cover it with a quilted cloth sewing machine cover to protect against sunlight, moisture, dust, etc. Clean out the bobbin area after every project or after every 3 to 4 hours of sewing. If you are working with linty material, clean more often. Oil the race with one drop of pure clean sewing machine oil every two to three hours of sewing. Change your needle every five hours of sewing or every two to three projects. Have the machine professionally serviced annually.

What kind of oil should I use?

Only use clean clear sewing machine oil. Many household oils contain paraffin which gets gummy and can mess up your sewing machine.

Things You Need To Care For Your Machine:

Sewing Machine Oiler
Canned Air
Vacuum Attachment Kit
Tooth Brush & Straight Brush
Button Hole Block & Cutter
Bobbins
Quality Threads & Needles



REVIEW:

- Caution: Be careful when moving and carrying your sewing machine.
- Caution: Check cords to insure safety.
- Plug in cords and test for mechanical turning ease.
Use hand wheel test as needed.

- Clean Out Bobbin Area.
 - Remove Needle
 - Remove Needle Plate
 - Remove Bobbin & Bobbin Carrier
 - Remove lint and debris.
 - Put One Drop of Oil On the Race.
 - Use Only Pure Clean Sewing Machine Oil
- Reassemble.

CHOOSING THE RIGHT SEWING MACHINE



WHY BUY A NEW – MODERN SEWING MACHINE?

There are many different reasons. Most commonly: A new machine will be easier to use. . A new machine will do more. . A new machine will have amazing new features such as Needle Up/Down, Finger Control On/Off & Speed Control, Easy Reverse, Automatic Tension, Automatic Threading, built in thread cutters, pulse motor drive, improved stitching, hundreds of utility and decorative stitches, hands free presser foot control, embroidery, more possibilities than you could imagine.

A new machine will be more fun to use. . A new machine will take the work out of sewing. . A new machine will be clean and fresh to look at with no rust or grime. Whatever your reasons, choose the right machine for you. You deserve it.

ASK YOURSELF SOME QUESTIONS?

What kind of sewing do you do now?

What kinds of sewing would you like to do?

What possibilities can you imagine doing if you could?
What features do you have in your current machine that you really like?
What features would you like in your new machine?
Is this machine intended as your last sewing machine purchase, or just to get you by until you can afford what you really want?

If you are a beginner, it may be difficult to determine what machine is truly best for you. Buying a "starter" machine, may seem a good idea, but it may also limit your horizons rather quickly. It might be better to find a group class, or club where the machines are provided while you learn. Experimenting on new machines is always a good idea. Many independent sewing machine dealers will allow you to practice on their display models for an hour or two to make sure the machine is right for you.

The more you learn, and the more possibilities you discover for your creative expression – the more features and capabilities you will want in your machine.

EXPLORE YOUR OPTIONS.

There are several different types of sewing machines today. "Mechanical" sewing machine makes basic stitches with gears and levers driven by an electric motor. The traditional AC sewing machine motor revolutionized earlier treadle and hand crank machines, but commonly make noise while building up enough torque to drive the sewing mechanisms. Mechanical machines also are a bit difficult to control when first starting a seam and tight places.

An "Electronic Sewing Machine" gives you the added benefit of improved power and stitch control through use of electronics.

A "Computerized Sewing Machine" gives you more variety

in stitches, better stitch control, and smoother operations.

Many "Computerized Sewing Machines" have the added benefit of being able to do beautiful embroidery and monogramming.

A cheap mechanical sewing machine may be purchased through a big box store like Walmart for under \$200. Unfortunately, they do not offer support, repair services, or instruction on how to use the machines. A basic sewing machine can be purchased for under \$500 through thousands of independent sewing machine dealers across the country. The advantage of purchasing this better machine from a local dealer is that the local dealer will teach you how to use the machine, provide repair services when needed, and provide technical support year after year. Still, you may have good reason to consider a better machine. If you only want a machine for very occasional emergency fixes, a basic machine may meet your needs. If you want a convenient, full featured machine for maximum ease of use and creative potential, you may want a midline or even a high end sewing machine.

When choosing a sewing machine, it is important to consider quality.

A buyer who buys cheap, may feel pleased at the point of purchase, but will most certainly regret it every time she struggles to use it.

A buyer who buys Quality, may feel extravagant at the point of purchase, but will be thrilled every time she uses the quality machine.

A cheap sewing machine may get the job done, but it is so much easier and more enjoyable to use a quality machine.

Baby Lock, Bernina, Janome, and Pfaff are the highest

quality and most full featured sewing machines on the market today.

WHERE DO YOU BUY A QUALITY SEWING MACHINE?

You have three choices today: Internet, Mass Merchandisers, Independent Sewing Machine Dealers.

Internet purchases may offer good pricing, but you may sacrifice more than expected. Internet sales send you a box, provide no classes, provide no service, and provide no support. Only outdated, voided models and models that do not sell well through more traditional means are usually sold over the internet. For those few that provide services, you must cover shipping every time. Often the manufacturer's warranties are voided if sold over the internet.

To get the best quality sewing machines you will have to look elsewhere. Half of the value of a sewing machine is the support you receive with the purchase. If you just get a box, you just get a box. Buying a sewing machine is very different from most purchases. You will need instruction, repair services, technical support, and more that do not come in a box.

Mass Merchandisers generally offer only the cheapest low end often disposable machines. They offer no support, no local repair services, and no classes to learn how to use the machine.

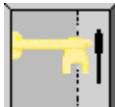
Independent Sewing Machine Dealers generally offer a wide selection of quality sewing machines plus a whole set of added benefits: classes, expert help, repair services, technical support, and access to accessories and supplies.

In the opinion of the authors, it is best to purchase a sewing machine from a reputable dealer that provides help, classes,

clubs, technical support, and quality repair services. Unless you are a sewing machine expert, it is always advisable to buy from someone who is, and who is going to be at your side for many years. Indeed, half the value of a new sewing machine may be in the support you receive when and after you buy.

Remember, the most expensive sewing machine is always the one in the closet no matter how much it cost. If you fall in love with your machine, find it easy and exciting to use, and have the support you need when you need it; you will sew more and enjoy it more.

How To Thread Your Sewing Machine



Threading your sewing machine is a daunting task if you are unfamiliar with your machine and how it works. It becomes easy and automatic, once you understand your machine.

Here is a quick easy way to thread your machine right every time.

- Place thread spool on the spool pin making sure the thread easily flows off the spool. Vertical spool pins need to make sure the spool turns easily or the thread is lifted high above the spool without snagging on the edge of the spool. Horizontal spools require spool caps (plastic pieces) that hold the spool in place and are large enough to provide a lift off the edge of the spool. Many spools have slits or bumps or rough edges. These must not interfere with the easy smooth delivery of the thread.

- o Guide the thread from the spool through, over, around every thread guide. Normally you can see the natural flow from Right to Left toward the needle and tension areas.
- o Make sure the presser foot is raised.
- o Guide the thread through the tension discs. These are often hidden, but the thread flow should be natural. On front mounted and side mounted tensions, take care to guide the thread around the tension set, through the tension discs, and back across the tension spring.
- o Continue to follow the thread guides to the needle bar take up lever. This is essential. Unless the take up lever picks up the thread, you will get no or irregular stitches.
- o Continue the thread down and through the eye of the needle.
- o The upper thread is threaded.

To thread the bottom thread, will depend on the kind of bobbin and hook assembly you have. First, wind the bobbin making sure the thread winds smoothly on the bobbin. Avoid winding more than one thread on a bobbin at a time, and be alert to any loose windings that could get messed up.

If your machine has a drop in bobbin, simply place the bobbin in the carrier and drag the thread through the bobbin tension.

If you machine has a front or side loading bobbin, it will have an external bobbin carrier. Place the bobbin in the carrier. Draw the thread back through the bobbin tension. Please note, the thread must draw back through the tension. In most cases the thread will come off the bobbin clockwise, and draw back counterclockwise.

HOW TO ADJUST TENSIONS



Tensions are a common source of problems in sewing. Understanding how tensions work is essential for every sewing machine user. It is not as complicated as some believe, and not as simple as some might think.

Tension is the amount of drag or resistance on the thread as it moves through the sewing machine. When the tension on top and on bottom are balanced properly, the threads will join in the middle of the fabric with no excess thread on top or the bottom of the fabric.

Upper Tension. The thread on the top of the sewing machine is threaded from the thread spool over and through a series of thread guides, through the tension assembly (a set of discs with adjustable pressure on the discs), through the take up spring, through the take up lever, and finally through the eye of the needle. There are minor differences in how sewing machines are threaded, but there is amazing similarity too.



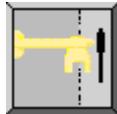
Important:

1. Make sure the thread on the spool is evenly flowing off the spool.
2. Follow the prescribed thread line through all guides.

3. Look for any abnormality that might snag the thread. Fix it.
4. Always thread the take up spring and take up lever properly.
5. Thread the needle as manufacturer recommends. Most thread front to back, but some older machines thread right to left or left to right.
6. ALWAYS thread the machine with the presser foot UP until you are ready to thread the eye of the needle.
7. Test the thread tension with the presser foot up. Make sure it easily flows through the machine.
8. Put the presser foot down and thread the eye of the needle.
9. Test the thread flow by gently tugging on the thread. Avoid bending the needle. You should feel a serious drag on the thread.
10. Lift the presser foot and retest. There should be little or no resistance.

The upper thread tension is adjusted by tightening or loosening the tension adjusting knob. You may have been told that on your machine, the tension is right when the knob says 3 or 4. This is not necessarily true as we will soon see.

Lower Tension. The lower thread system is even a little more mysterious than the upper thread system, but it is in many ways even more simple. The lower thread system may involve top loading bobbins, front loading bobbins, or even side loading bobbins. Older machines often used shuttles mounted underneath the machine. While there are a variety of different designs, the essentials are the same. Thread is wound on a bobbin (older machines used shuttles the same way). The bobbin is placed into a case or holder. The thread in the bobbin is drawn through a tension device and up to the top of the sewing platform.



Important:

1. Be sure you have the right bobbin.
2. Be sure the bobbin thread is properly wound.
3. Be sure to place the bobbin in the bobbin carrier exactly the way your sewing machine manual says. The bobbin thread usually moves from left to right or clockwise around the bobbin as it turns.
4. Thread through the lower tension. Usually, this means the bobbin thread will peal back through the bobbin tension rather than follow along or just flop in the wind. Notice the piece of metal on top right of the carrier. A small metal spring usually built into the bobbin carrier applies pressure or resistance to the bobbin thread. This is the bobbin tension spring. A tiny screw holds the tension spring in place. Turning this screw to the right will tighten the lower tension. Turning it to the left will loosen the bobbin tension. ("Righty Tighty, Lefty Loosey")

5. Some bobbin carriers are built in, but many are inserted after loading the bobbin.
 - a. In the later case, test the tension by doing the following. Pull off about six inches of bobbin thread through the tension. Dangle the bobbin carrier with the bobbin in it while holding the thread above it. The lower tension should hold the carrier so that it does not drop. If it does, just turn the screw a quarter turn to the right. If it does not drop, try bouncing the carrier a little. If the tension is properly set, the carrier will drop a little and stop. If it does drop a couple of inches and stops, all is good. If the carrier does not drop at all even after pretty good bounce, the tension is too tight. Turn the screw a quarter turn to the left. Try again.
 - b. Many machines have a drop in bobbin that fits into a bobbin carrier below the needle plate. Once the bobbin is placed in the carrier, the thread is drawn under a tension spring. The same gentle pull test used in the front loading bobbin can be used with the drop in bobbin, but it is a bit less precise. If you continue to experience difficulties with the bobbin tension, it may be adjusted by turning the small tension screw on the spring of the bobbin carrier. You may also seek the expert assistance of your local sewing machine technician if needed.
6. Make sure there are no snags in the thread line after you bring the thread up through the needle plate hole.

BALANCING TENSIONS. When the thread from the top and the thread from the bottom meet and form stitches

in the center of the fabric with not excess thread on top or bottom, tensions are said to be balanced.

Think of your fabric like a stream of water. There are two teams with ropes (threads) tugging in opposite directions. Sew a straight stitch seam four or five inches long. Look at the thread. Where does the stitch tie off or connect? Do you see small loops, nubbies, or other signs of excess thread on the top or bottom of the thread. The team that pulls the hardest wins the excess thread. If the upper tension is tighter than the lower tension, excess thread will appear on top of the fabric. If the bobbin tension is tighter than the upper tension, you will see excess threads underneath the fabric.

To balance the tensions, simply adjust the upper tension in relation to the lower tension. If you have tested the bobbin tension as indicated above, you should not have to adjust the bobbin tension unless you significantly change the size of thread.

If there is excess thread on the bottom of the fabric, increase the tension on top by turning the adjustment knob to a larger number (usually turn clockwise). If there is excess thread on the top of the fabric, decrease the top tension by adjusting the tension knob to a lower number (counterclockwise).

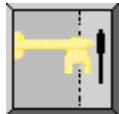
If you continue to have tension challenges, take the machine to your local sewing machine service center for a thorough service.

Important When You Have Tension Challenges:

1. Rethread & Double Check threading.
2. Test lower and upper tensions as you thread.

3. Test sew and adjust upper tension – increase or decrease.
4. Have a professional sewing machine technician service the machine.

How To Sew A Seam



To sew a seam, the first question you must ask is "Do I Need An Anchor Stitch?" If you intend this seam to be temporary or if it will be secured by a crossing seam, it may not need an anchor stitch. If you intend the seam to stand on its own forever, start the stitch by lining the fabric up under the presser foot with at least enough space to sew three to four reverse stitches. Sew your anchor stitch. (Sew three to four reverse stitches.) Then proceed to sew normally.

Guide the fabric for all stitches in the same way. Place the fabric about one half inch under the presser foot.

Place your guide hand (right hand) along the edge of the fabric 4 to 5 inches in front of the needle in order to guide the fabric accurately.

Place your smoothing hand (left hand) on the top of the fabric to the left and in front of the needle to keep the fabric lying flat and flowing smoothly.

Never place your hands behind the needle. Do not pull the fabric through the machine. Not only is this dangerous potentially leading to serious injury, it can ruin your finished product. Allow the sewing machine to drive the fabric through the machine. If the fabric does not move is it

should, something is wrong. Feed dogs may be out of position, filled with lint, or there may be too many layers of fabric. A walking foot may be needed to assist the feed dogs. If the machine is working properly, it should draw the fabric through smoothly without any difficulty. If it is not working properly, it needs to be fixed.

When sewing curves, remember not to turn too sharply. A gradual run will keep the stitch looking good. When using zig zag or satin stitches it may be necessary to slightly shorten the stitch length, if you are find too many open spaces between threads along curves.



GO TO BEGINNER PROJECT # 1.1

How To Select and Adjust Stitches



If you include all the hand stitches, sewing machine utility stitches, sewing machine decorative stitches, serger stitches, and industrial manufacturing stitches, you have a bunch of stitches. On a moderately priced home sewing machine you will find twenty to two hundred different stitches plus variations in stitch length and stitch width as well as stretch factors. A top quality home sewing machine will have eight hundred to a thousand different stitches.

There are several distinctly different types of sewing machines and each type uses slightly different systems to select and form stitches.

Mechanical sewing machines are the least expensive sewing machines and use the most primitive technologies. An AC electric motor turns a belt which turns the upper sewing machine shaft. The upper shaft transfers the mechanical energy along the shaft past the cam system to the needle system. A lever on a parabola connection transfers the mechanical movement down to the lower sewing machine shaft which may be split into a dual lower shaft one to drive the hook and a second to drive the feed dogs. Stitches are formed in a mechanical machine by aligning cam trackers (levers that rub against a cam gear with bumps and shallows) with the cam gear so that when the cam gear moved the tracker lever will bounce back and forth. This movement is then transferred by lever to the needle assembly moving the needle bar back and forth and up and down to form the desired stitches. The alignment of the cam trackers is achieved by use of levers, buttons, or dials protruding on the top or face of the sewing machine. The user moves the stitch selector to the proper position, and the trackers line up to form that stitch. Additional dials or levers are used to adjust the stitch length and stitch width.

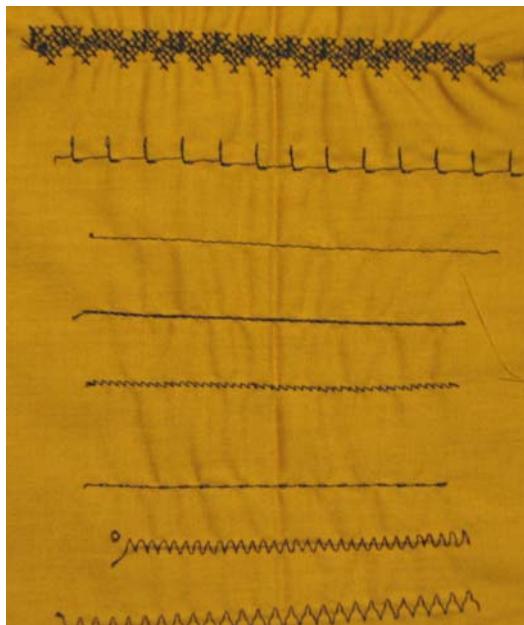
Electronic sewing machines use electronics to control the power drive system and the stitch selection system. Note many machines are blends of mechanicals and electronic technologies, and others are blends of electronics and computer technologies. Fully electronic sewing machines use electronic circuits to manage motor output giving the sewing machine greater torque, increased consistency, and smoother sewing. Stitches are selected with electronic buttons that control the production of stitches. Electronic sewing machines usually offer more different stitches and more dependable sewing.

Computerized sewing machines use the most advanced technologies to produce the greatest number of different stitches, smoothest sewing, and most dependable operations. Computer input is made either by touching buttons on the computer keypad or a touch screen. The

computer takes the signal and manages a set of DC pulse motors to create and manage stitches. It is common for computerized sewing machines to offer hundreds of different stitches.

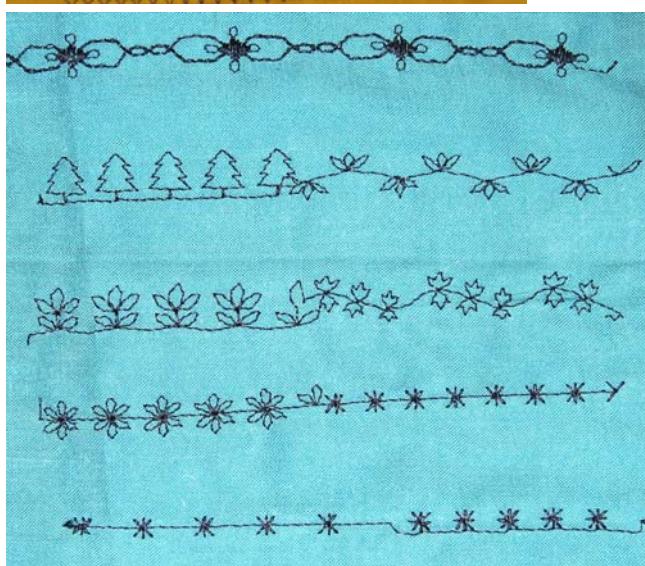
To choose a stitch on a mechanical sewing machine turn a dial, move a lever, or press a button. On an electronic sewing machine, press a button attached to an electronic switch. On a computerized sewing machine, press a button on the computer keypad or touch the selection on a computerize touch screen.

Three basic types of stitches are used: Utility Stitches, Decorative Stitches, and Button Holes.



UTILITY STITCHES

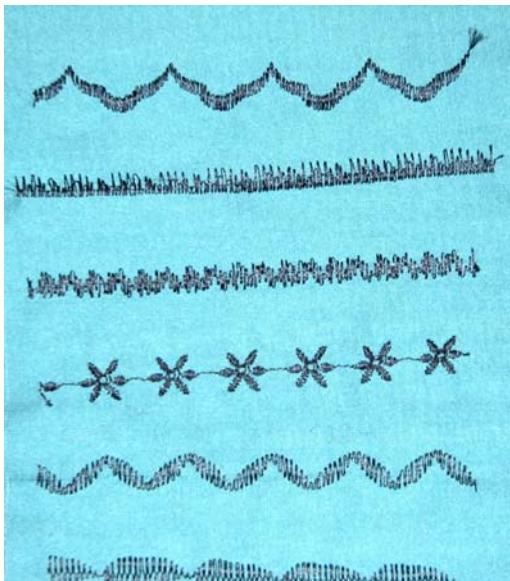
These include the straight stitch, the zig zag stitch, the blind hem stitch, stretch stitches, the overcast stitch, the blanket stitch, and other useful stitches for practical purposes.



DECORATIVE STITCHES.

These include many varieties of outline and shaped stitches. They also include a wide range of satin stitches as you can see below.

Button Holes include four step button holes, one step button holes, darning stitches, and eyelet stitches.



SATIN STITCHES

Satin stitches are the original decorative stitches, but form a special category of their own. Most notable is the closeness of the zig zag portion of each stitch.

What stitches does your sewing machine have?



GO TO BEGINNER PROJECT # 1.2

Some cheap machines offer several stitch lengths and/or widths. A machine might claim to have 12 stitch functions, while actually only offering a straight and a zig zag stitch with preset lengths and widths. These preset stitches are said to be locked stitches, because you have no control over them. In some better machines, you may also find decorative stitches that are locked to maintain the integrity of the stitch.

In most cases, however, your sewing machine will permit you to adjust the stitch length and width of most of its stitches. Look for an icon indicating the width or length adjustment knob. Turn the knob or slide the slide or otherwise adjust the stitch to the right to increase and to the left to decrease. A short straight stitch is lengthened to medium and then to maximum length for basting. A narrow stitch is widened from satin to its maximum width. Older machines typically have 5.5 millimeter stitch width, while

more modern machines will have widths between 7 and 9 millimeters.

SEWING MACHINE FEATURES & BENEFITS TO DIE FOR



When we think of sewing, we automatically think of the sewing machine. But there are some wonderful specialty sewing machines that can make sewing quicker and easier and more professional. In addition to a quality sewing machine, a fully outfitted sewing studio will include: a serger, a blind hemmer, and an embroidery machine.

The serger seams, overcasts, and trims in a single pass at roughly twice the speed of the home sewing machine. It is used as a mainstay in garment construction and home décor, but has great usefulness in all areas of sewing. It even has some wonderful decorative capabilities. Also note there are many different kinds of sergers. The most common is a 2 -3-4 thread serger, but you can also get 5 thread, 6 thread, even an 8 thread serger.

The blind hemmer is a single purpose machine designed to produce professional blind hems in garments and similar applications. If you plan to alter or construct clothing this is a vital tool.

Embroidery is where the action is today. Each year more and more people are discovering the thrill of embellishing for clothing, home décor, and much more. The embroidery machine may be a stand alone

machine doing only embroidery or it may be a combo machine. A combo machine is a combination of a quality sewing machine and an embroidery machine.

Sewing machine features make sewing easier, faster, and more care free. These are some of the neat features available on modern sewing machines that you may look for when exploring for your next purchase.

Electronic Foot Control: Older foot control devices are made of resistance devices using varying degrees of resistance to increase or decrease voltage to the AC motor. Users often complain that they get really hot when being used and sometimes when they are just sitting. Electronic foot controls provide much improved control over the drive system. They are safer and remain cool under pressure.

Pulse Motors: Mechanical machines use AC motors that are noisy, often undependable, and difficult to control; but sewing machines with electronic control and pulse motors are like sewing on a dream. They use the same force whether sewing fast or slow. They are fully responsive and provide full control. They are whisper quiet.

Thread Trimmers: It may not seem like much, but having a thread cutter mounted to the end of the sewing machine, makes sewing so much easier. May older machines required you to grab the scissors whenever you wanted to cut the threads, but a thread trimmer makes it easy. Just pull the thread to the trimmer and cut.

Automatic Thread Trimmers: Now this is a true advancement. The regular thread trimmer was a step forward, but the automatic thread cutters or built in scissors are wonderful. Imagine your are sewing along

and you want to stop sewing. You lift your presser foot, adjust your hand wheel, and pull the fabric and thread out to use the old style thread trimmer. Or, you are ready to stop sewing and you touch the scissors button. The machine automatically trims threads top and bottom. It is wonderful.

Reverse/Anchor: Machines have had reverse levers for years, but the newer machines have a little button conveniently located just above the needle. Hold it in and the machine back stitches two or three stitches to anchor your seam. Or hold it in a bit longer and it will continue sewing in reverse. So convenient and easy.

Needle Up/Down: Older machine just stopped wherever, but more modern machines empower you with control over the position your needle stops when you stop sewing. If you want the needle up, touch the button. If you want the needle down, touch the button. Set it to consistently stop in the up or down position. Just the way you want. This makes pivoting quick as a flash.

Adjustable Foot Control: Older foot controls responded only to the amount of pressure you used to push down with your foot. Adjustable foot controls enable you to slow the machine response down or speed it up depending on your desires at the time. If you adjust it slow, you can push the control all the way to the floor and the machine will still sew slowly. Adjust it fast, and zoom on down with even a light touch on the control.

Lighting: Remember that rear mounted light on the old singers. What a wonderful addition they made at the time. Today, better machines have great cool lights in all the right places.

Start/Stop Button: This is a revolutionary feature. At

the touch of a finger, your machine sews. You no longer need that foot control, though you may want to use it sometime. The Start/Stop Button gives you a whole new way to control your sewing machine.

Slide Speed Control: On some machines this device works exclusively with the Start/Stop Button giving you full control over the speed of your sewing. On others, the slide control may also control the foot control or serve as a manual stitch width control.

Free Hand Sewing: The knee lift lever lifts the presser foot with a gentle nudge of your knee. How great it is to lift that presser foot without having to reach to the back of the machine manually.

Presser Foot Control Button: Like the knee lift the automatic presser foot button is a God send. It is so convenient to touch the button and watch the presser foot rise automatically.

Semi-Automatic Threading: Most modern machines have what we call automatic threaders. Wrap the thread and turn a lever to thread the needle. You don't even have to be able to see the eye of the needle anymore.

Fully-Automatic Threading: A few spectacular sewing machines have fully-automatic threading. Just touch the button, and the machine robotically threads itself. Whalla!

Magnifiers: A great aid for sewing is the machine mounted magnifying glasses. They really help you see what you are doing.

Thread Stands: Many machines today come with multiple thread stands. Some have two spool pins built in. Others have secondary spool pins as accessories to

attach to the top of the machine. Still others offer special tread stands that sit or fasten to the back of the sewing machine offering as many as ten spool pins with guides for easy color changes.

Presser Feet Systems: Perhaps the most elegant and rugged is the presser feet system by Bernina. Over a hundred special feet enable the Bernina user to achieve things with their sewing machines others just dream about. Most other companies offer a line of specialty feet for the snap on systems. Using the right presser foot can make any sewing project quicker and easier.

Essential Sewing Machine Skills

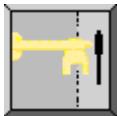
Here is list of topics covered in this lesson:



Origins of Modern Sewing: How important is the sewing machine to modern sewing?



How Your Sewing Machine Works: Understanding the basics of threading, stitch formation, and tension is essential.



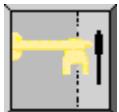
Care And Feeding Of Your Sewing Machine: As a user, you must frequently clean out the bobbin area of your machine and oil the hook race to keep the machine working properly.



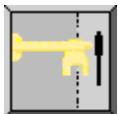
Choosing The Right Sewing Machine: The right equipment makes sewing quicker, easier, and more carefree.



How To Thread Your Sewing Machine: Follow the upper thread line making sure to through every thread guide, through the tension spring, through the take up lever, and through the eye of the needle.



How To Adjust Tensions: A properly balanced stitch has the upper and lower threads meeting in the middle of the fabric with no excess on top or bottom.



How To Sew A Seam: Guide from the front. Let the machine do the work. Complete Beginner Project 1.1.



How To Select And Adjust Stitches: Know your machine and learn how to select and adjust your stitches. Complete Beginner Project 1.2.



Features & Benefits To Die For: When you have opportunity to explore a new machine look for all the neat features that are possible. Convenience features make sewing more carefree, less stressful, and more fun.

MY BEGINNING SEWING MACHINE

Ok! Run down to Target or Walmart and grab one off the shelf. Or, you might drive past a garage sale and pick up a steel or cast iron antique.

Maybe not.

First, what do you actually need and want in a beginning sewing machine?

Dependability And Reliability.

When you buy a sewing machine, you do not want to constantly struggle with it making it work. Often when you get a cheap machine, it won't even work when you first take it out of the box.

When we first started selling sewing machines as an independent dealers, we sold a line of machines that had a great price around a hundred dollars. After having a few returned, because they didn't work when the customer got the machine home, I had other thoughts. I started taking the machine out of the box lubricating it, and testing it before I let the customer take it home. At least I knew it worked when it left the store.

Since then, I decided it was better to sell machines that always work right from the start. Customers always look for price, but I believe value is much more important.



Easy to Use.

Lets face it. Some sewing machines are just not. They may be difficult to thread, difficult to adjust the stitches, and difficult to use.

In ages past, sewing machines were designed and intended to be work horses. Sewing was often hard work, but today things should be different. Sewing should be fun, easy, relaxing, and carefree.

It all starts with the sewing machine. The biggest difference between a \$200 sewing machine and a \$800 sewing machine is that the cheaper one is usually more troublesome to use and the more expensive one is usually easier and more fun to use.

Why? There are different kinds of sewing machines. Cheap ones are mechanical machines with AC electric motors. Sounds Ok. To use a mechanical machine on the flat with no seams to sew over and no thicknesses to deal with is fine, but you have to race the motor to build up enough torque to get over bumps and multiple layers. When you do this you tend to lose stitch quality and control. The better machines handle these things with electronic controls and pulse motors making sewing a breeze.

Also, the more expensive sewing machine will have more stitch control, more different stitches, more features like needle up/down, easy reverse, stretch stitches, thread cutters, easy threading, and more.

f. Remember you usually get what you pay for.



Fully Functional

There is some deception when it comes to advertising sewing machines. When you see the term "stitch function", many people think "stitches". Not so. If you have a straight stitch that has very short stitch length, and another straight stitch with a moderate stitch length, and another straight stitch with a super long stitch length; how many different stitches do you actually have? Just One. You have a straight stitch that has different lengths.

Cheap machines will make claims like "eleven stitch functions", but only have two actual stitches – straight and zig zag.

To begin an enjoyable hobby of sewing, you really do need a sewing machine that has full functionality with all the basic utility stitches. Look for adjustable stitch length and stitch width. Look for straight stitch, zig zag, blind hem, overcast, and a few others. The convenience of having a dozen or more built in decorative stitches can make your machine a joy to use for many years.



Durable

Have you noticed that all sewing machines pretty much look the same? It can make it hard to choose.

They are not all the same inside where it counts.

Last year one of our store managers ordered a bunch of super cheap sewing machines that we could offer for sale at \$79 or even as low as \$39. The machine does a straight stitch and a zig zag. It makes a great gift for a seven or eight year old, but it is not a machine we can recommend to someone who really wants to learn to sew. Why? It is the insides that count. All cheap plastic. If it breaks, too bad.

When you purchase a sewing machine, think to yourself, "How long will I be able to depend on this machine?" A quality sewing machine can last a lifetime.

Fully Supported

Do you want a disposable sewing machine? Do you want a machine that you have to sent to Washington for service? Do you want a machine that has no one to help you figure out how to use?

When you purchase from a sewing machine dealer that

provides local repair, classes, technical support, and expert service, you get much more than a machine.

You could buy a machine for \$400 from a department store, but what do you get? A machine in a box.

Or you could pay \$450 for the same sewing machine from a full service dealer. What do you get? A machine in a box, classes worth \$40 to \$120, technical support worth \$200 per year, local repair service \$??, expert support \$??...

Always buy value.



CHAPTER SIX Tools of the Trade

What sewing tools are really necessary
to enjoy sewing such as
"scissors, forceps, pliers, nail nipper, tweezers"?

What is more frustrating than starting a project only to discover that you do not have the tools or supplies to finish?

On the other hand, if you are a newcomer to sewing, and you visit a sewing shop, you might be overwhelmed. There are thousands of little gadgets and big things too. There are thousands of yards of fabric. Even in a small sewing shop, the choices can be overwhelming.



Do you really need to spend \$10,000 just to sew a simple project?

No!

It might take a lifetime of sewing to spend that kind of money. There are costs associated with sewing, but the rewards far outweigh the costs. To get started, even if you have nothing to start with, should cost less than \$500 and certainly less than \$1,000 even if you go all out.

Depending on the type of sewing you choose to do, you will almost certainly sew for less than what you might purchase the same quality product. If you buy ready made clothing at a huge discount say a pair of slacks for \$2.00. The actual purchase may be less than what it would be if you made it, but usually it does not fit and could use your own personal touch. Add in the cost of hiring a professional to adjust or alter that garment and the price goes way up. Add in the cost of have a designer embellish that pair of slacks, and the rockets red glare. When you have the skills, you can turn that \$2.00 purchase into a one of a kind perfect fitting custom garment worth maybe \$100.00. Would you believe there are people who do exactly that as a business with blue jeans and make big money?

While we are talking about the initial cost of beginning to sew, it is important to remember that you get what you pay for. For example, you can buy a \$2.00 pair of scissors, a \$10.00 pair of scissors, or a \$39.00 pair of scissors. Which one is the best buy?

You decide.

- ➊ The \$2.00 pair is poorly balanced making cutting awkward and uncomfortable. It is probably going to be worthless and unusable within a very short time and can't be sharpened.
- ➋ The \$10.00 pair will do a much better job for many projects, but will eventually go dull. It can be

sharpened, but the edge does not stay sharp for long because its metal is not designed to last.

⊕ The \$39.00 pair just happens to be a top quality tempered steel pair with perfect balance for easy cutting. It will last for a long long time and when it starts getting dull, it will be easily restored to like new condition for years of faithful service.

⊕ Which one is the best buy?

If you intend to enjoy sewing, do not make things difficult by buying the cheapest thing you can find. Buy quality. That does not mean that you have to buy the \$200 designer scissors. Buy quality not flash.

What exactly do I need?

The answer will vary a bit depending on what type of sewing you want to start doing. Remember when we use the word "sewing" we actually include a whole world of creative wonder. Generally, if you start sewing as part of an organized beginning sewing class the following items are needed.

1. Needles
2. Thread
3. Scissors
4. Seam Ripper
5. Pins
6. Pin Cushion
7. Measuring Tape
8. Seam Gauge
9. Acrylic Ruler (5" by 15")
10. Fabric Markers
11. Fabric

Needles

Needles are in many ways the most important part on your sewing machine. They are frequently the first cause of problem sewing too.

Needles are not all the same. They come in different sizes. They have different needle point types. They are made differently. They are made of different materials. Sound confusing? It can be, but not too bad.



As a beginning sewer, you will need a universal point size 12 needle. You can purchase these from almost any place that has fabric or sewing machines.

Later you will learn how to use the different types of needles and will need to expand your selection. You can either purchase a prepackaged assortment of the major needle types, or purchase each type separately. As a beginner, it might be preferable to buy the assortment so you will have what you need when you want it.

THREAD

This is a must. The right thread will make your project and the wrong thread can ruin it.

We think of filaments as yarn if the materials are knitted together, but we think of them as threads if they are woven together into fabric. Yet, the filaments used to join fabrics together are almost universally called thread. We might even say that this is the thread that binds.



THREAD MYTHS



- Myth #1. All threads are the same.
- Myth #2. Thread content does not matter, any thread will do.
- Myth #3. Threads last forever, old or new it is all the same.
- Myth #4. Threads are not affected by the elements.

Myth #5. Switching between sizes of thread does not affect stitch quality.

Myth #6. Thread colors do not change.

THREAD FACTS



Fact #1. There are many different kinds of thread, made from different kinds of fibers and manufactured very differently.

Fact #2. Threads are designed for different purposes. Their content may be synthetic, natural, or blended. Some threads stretch. Some threads break easily, and others are difficult to break. Some threads are designed for clothing construction. Some are made for quilting. Some are made for decorative purposes and others are made for practical necessity. Spun polyester threads and cotton covered polyester threads tend to break easily, while long fiber threads are stronger. There are huge differences in quality. Some threads are two ply or three ply or are made in other special ways.

Fact #3. Threads, especially those made with natural fibers, decay over time. They lose their color, texture, strength, and generally the qualities for which they were manufactured. Even the synthetic fiber threads will lose their quality over time. If you have old thread, throw them away. Do not use them.

Fact #4. Moisture, exposure to sunlight, and heat cause threads to deteriorate. Always keep threads out of direct sunlight, away from moisture, and away

from heat. Natural threads can rot on the spool in a matter of days when exposed to extreme elements.

- Fact #5. Unless your sewing machine has automatic tension, you must adjust your sewing machine tension every time you change thread size. On machines with poor quality tension systems, you may find that you have to adjust tensions frequently even when using the same size threads. Thread sizes are marked largest to smallest. A 30 weight thread is large and used for decorative applications. A 50 weight thread is normal sewing thread used for general sewing. An 80 weight thread is thin and used for delicate situations.
- Fact #6. Threads do not look the same under different lighting. While poor quality threads may actually fade or lose their color; all threads reflect the light slightly differently. Florescent lighting, incandescent lighting, and natural sunlight may reveal very different appearances of the thread. When choosing thread it is a good idea to double check the color in natural lighting. Also, note that thread colors will take on the character or blend with the colors in the fabrics of our projects.

COTTON COVERED POLYESTER THREADS



The most popular sewing thread is what is called cotton covered polyester thread. It is sold at all the cheap sewing supply stores. The idea behind the thread is to use the stronger coarser thread core made of polyester and soften

it by wrapping cotton around the core. (The polyester is spun or manufactured like cotton candy, from very tiny particles stuck together to form this abrasive core of the thread. It is often called spun polyester. The soft fibers of cotton are wrapped around the polyester core to form the thread.) This thread is usually used in clothing construction, but may be seen in many different settings. Good idea until you use it.

When you use cotton covered polyester thread, watch the eye of the needle. See that fine powder. That powder is the cotton fibers being torn away by passing through the eye of the needle.

Now think for a moment. If those fibers are stripping off there, what about elsewhere?

Do you suppose that lint and fibers are collecting inside the sewing machine bobbin tension area or the upper tension area? You bet.

The same thing happens less noticeably when the thread passed through the upper tension discs and the bobbin tension. In fact, that powdery stuff can really mess up your tensions causing poor stitch quality, and it can mess up the rest of your sewing machine too.

Recommendation: Avoid cheap threads and especially cotton covered polyester threads. They may be labeled as Cotton Covered Poly, Dual Duty, or some similar name. The primary manufacturer of this kind of thread is Coats and Clark.

If you are going to use cotton covered poly threads, use a slightly larger needle eye and decrease the tension pressures. This will help reduce the stripping of the cotton fibers.

BETTER THREADS



Instead of using "junk" threads why not use a better thread. As a beginner you might feel overwhelmed by all the different kinds of threads, different brands, sizes and shapes of the spools, and color options; but your local sewing teacher or expert sewing salesperson will gladly guide you to the proper thread for your project. Caution: fabric cutters in the big box stores are not sewing professionals or sewing experts. They are fabric cutters. If you want expert guidance, you must seek out an expert. You might consider checking your yellow pages for your local independent sewing machine dealer, sewing retail shop, or fabric shop.



When you begin a sewing project, it is essential that you choose the right fabric and thread. Always buy quality. Always make sure every part of your project matches your needs.



Long Fiber: Better Threads are usually "long fiber" threads. Often the label on the spool will say "long fiber" or "long staple". If you are unsure, ask the sewing sales person if the thread is long fiber and ask what the fiber content of the thread is.

For most sewing use 100% polyester long fiber thread. This is a strong thread made of synthetic polyester fibers measuring five inches or longer for maximum strength. It is colorfast. It works great on any project that will have some stress like children's clothing or home dec projects.

If you are sewing quilts and using cotton fabrics, try 100%

long fiber cotton thread. You will be very happy with the results. The threads will blend into the quilt providing a great finished product. You will see almost no lint, stitch problems, or sewing machine problems.

When you are sewing on a given type of fabric, it is always a good idea to use the same fiber content in the thread. If you are sewing on silk, you can use long fiber silk threads. If you are sewing on rayon, you can use rayon threads. If you are sewing on cottons, cotton does nicely. If you are sewing on -- get the idea?

If for some reason, you find yourself concerned about the strength of the thread. Maybe you need a stronger thread because of stresses on the project you expect in its use. Here is a simple rule of thumb: natural fibers break easily, while synthetic fibers are stronger and break less. Polyester is stronger than cotton.

THREAD SIZES



What size do you need? Yes, thread comes in all sizes.

The smaller the number the bigger the thread. For most sewing try using a 50 or 60 weight thread. For more delicate fabrics, you might consider a 70 or 80. For decorative applications you might consider a 30 or 40 weight.

Cording is very similar to thread and is generally, treated the same. In most cases, you will use cording for decorative applications to give some size and distinction to a project.

Before you invest in thread, check with your local sewing expert and let them know what kind of project and materials you plan to use.

The size of thread may be measured in two different ways. In the sewing shop it is usually sized by its weight, but commercially it may be sized according to the "Denier System" or "Tex System" by length.

As already mentioned, the thread size for larger or thicker thread is a smaller number. For example: A thick thread used for decorative sewing would be a 12, 20, or 30 weight thread. A general sewing thread might be a 50 weight thread, and a delicate sewing thread would be say an 80 weight thread. What this actually means is that thread actually weights 1 gram if it is 12, 20, 30, 50, or 80 meters long. Whatever the length of the thread is when it reaches a weight of 1 gram is the size of the thread. Therefore, it is easy to understand that a piece of 12 weight thread is much heavier and thicker than an 80 weight thread if you have the same length of thread say two feet in length. We might also say, the higher the thread size number – the thinner and lighter weight it is.

In the "Denier System" thread is measured by its length. In this system, the bigger the denier number - the thicker and heavier the thread. It is determined by how much the thread weighs if you have a spool of 9000 meters. If the spool weighs 120 grams, it is sized as 120 d thread. If the thread is a two strand thread the size is indicated as 120/2 denier or two strands of 120 denier thread. The thread is actually 240 denier or 240 grams per 9000 meters, but since it has two strands it is so indicated. If you are buying embroidery thread, you may find the denier system indicated. Just remember the larger the denier thread number is the thicker and heavier the thread is.

You may also run into the designation of "Tex". It has little to do with Texas. Essentially, it the same measuring system as the Denier System except instead of using 9,000 meters it uses 1,000 meters.

Therefore, if you have a thread that is Tex 25, it is roughly

equivalent to a 240 denier, and also equivalent to a 40 weight general sewing thread. A Tex 33 thread is equal to a 300 denier thread which also equals a 30 heavy weight sewing thread.

Your Thread Collection



Since every project requires thread, it is a good idea to collect your own selection of basics. This way you will not have to run out and buy a spool of thread for every different part of your next project.

What should you include?

This depends largely on the kinds of sewing project you want to sew. If you are interested in clothing construction, you will need to plan your collection around these types of projects. If you plan to do home dec, quilting, or embroidery, you will need to plan accordingly. Some threads can be used in many different kinds of sewing and should be kept on hand at all times. Other threads may only be used for special situations, and would be something to collect later.

The more different kinds of thread in the more different colors the more convenient your sewing will be. If you already have the thread, you do not have to get in the car and drive to the sewing store to get more.

Sometimes it is cheaper to buy quality thread in thread sets. For example: you might find a box of a hundred spools of a particular thread for twenty percent less than buying spools individually.

Basic Sewing Thread: You will almost always need basic sewing thread. Specifically, choose a quality brand of long

fiber polyester thread and long fiber cotton thread. These too are suitable for lots of different applications.

You will need white, off white, black, and gray as basic colors.

In addition to these basics, choose half dozen colors that you think you might be able to use.



Thread Storage: You may keep thread on a thread rack, in plastic thread boxes, in drawers, lots of different places. It is important that you keep thread out of sunlight and away from moisture and heat. Example: do not store your thread on the window sill or under the hot air vent.

Scissors

Scissors are essentials. You may want several. Make sure you buy quality or you will regret it. Two things to consider when buying your first scissors:

1. Different Types of Scissors

- a. You will need a pair of six inch bent handled sewing fabric scissors. Insist on quality. The old standby is Gingher, but Heritage Cuttlerly is becoming very popular. There are less expensive scissors, but be careful to buy value.



- b. You will want a pair of pelican embroidery scissors. These are great for trimming, and cutting close in places.



- c. You may want a pair of fine embroidery scissors. These are super when trying to cut tight places and trim threads.
- d. Thread snips are a necessity. They are helpful when trimming, ripping, and more.



- e. There are many other types of scissors to choose from, but these three make a great beginning.
- f. Eventually, you may want to purchase a rotary cutting system to speed your cutting and increase your cutting accuracy. When purchasing a rotary cutter, always purchase a quality cutting mat with it. Also a good acrylic ruler is helpful for cutting with a rotary cutter.



2. Caring For Scissors

- a. RULE #1. Never use your fabric scissors to cut anything else.

- b. RULE #2. Always follow rule #1.
- c. Protect your scissors from paper, pins, and anything else that might dull, chip, or otherwise ruin your scissors. If you bought quality scissors, treat them that way.
- d. When they begin showing wear or grow dull, take them to a qualified scissor sharpening professional for sharpening. Many sewing machine repair shops also do scissor sharpening.

SEAM RIPPER

"As you sew, so shall you rip." Ripping seams is a basic part of sewing, and you need a quality tool to make this task quick and easy. There are many different seam rippers on the market today. Some are super tiny, able to fit into your wallet. Some are larger with ergonomic handles for ease of use. Two things to look for:

- a. Get a ripper with a long finger and a sharp curved blade.
- b. Get a ripper with a second finger with a beaded cap.



PINS

Pins are pins. Or maybe not. There are short pins and long pins. There are T pins, and glass headed pins, and round metal headed pins. What is the real difference?



The key is the ease of use. Short pins are more bother to use than longer pins. T pins are easier than round headed metal pins.

In our experience the best sewing pins, the easiest to use, are large glass head pins about one and three eights inches or longer.

PIN CUSHION

The traditional pin cushion is a soft ball or apple shaped padded cushion used to stick unused pins into for storage during sewing. Today magnetic "pin cushions" have become popular. It really does not matter here, because cheap ones will do the same job as more expensive ones.



MEASURING TAPE

A flexible cloth (not plastic) measuring tape at least six feet long is vital. Make certain that the tape has well attached metal ends on both ends of the tape. Look at the markings on the tape. Can you easily read them? Are the markings for metric and standard measures clear for precise measuring?



SEAM GUIDE

A six inch metal seam guide or hem guide is vital. It should have a plastic slide down the center for easy marking. Ask your sewing expert for best choice.



ACRYLIC RULER

You will need an acrylic (a synthetic fiber produced from polycrylonitrile) ruler 5" by 15" or larger. While there are many different types, sizes, and colors of rulers, you can get by with a standard clear one.



FABRIC MARKER

The term fabric marker is a broad term including dozens of different types of marking devices. At the sewing store you will find water soluble markers, air soluble markers, chalk markers, and a wide variety of shapes. As a beginning sewing student, you will need a pencil styled marker preferably of the chalk or water soluble type, but before you purchase the marker, ask your sewing professional which one they recommend for the projects you are planning. Eventually, you may want an assortment of different markers for different uses.

FABRIC

Your sewing teacher or expert sewing sales person will gladly assist you in purchasing the right fabric for your projects. Just ask.

You might want to explore a little bit about fabric, because like almost everything else: Not all fabric is the same.

Two fabrics may look the same with the same colors and patterns at first glance, but watch out. Looks can be deceiving. Fabrics are initially made into greigh goods (unfinished, unprinted) with specified thread counts per square inch. The higher the thread count the better the fabric. If you look at a fabric with say 50 thread count, and a second fabric with say 200 thread count they may initially look the same. The greigh goods, no matter what the quality, is printed and finished for sale. A bolt of 50 thread count fabric will be less expensive than one with 200 thread count, but there is also a huge different in quality. Poor quality greigh goods make poor quality fabric and horrible finished products that do not last. RULE: Always Buy Quality!

You can save yourself a great deal of frustration when it comes to fabric, by finding a fabric store that offers only top quality fabrics. When you buy based on price alone, you will usually be unhappy with the results. When you frequent a store with a good reputation and commitment to quality, you will gradually learn to recognize the quality. When you shop at a store with discount fabrics or one of the big box department stores, you will have to search for quality and check each bolt for density, grainline, true bias, and fabric content to insure you are getting usable fabric.



Your expert sewing professional is a great help in selecting all your sewing supplies, tools, and equipment. Ask questions. Get the low down and the straight facts so you can really enjoy your sewing experience.

CHAPTER SEVEN

What is a Sewing Show n' Tell?

When we discover new things, there is something special about sharing our discoveries. Kindergarten teachers learned a long time ago that children get excited about learning when they are permitted to tell others about those things that are important, interesting, or fun to them. The principle remains the same.



Sewing is an exciting hobby full of creative wonders. The wonders of sewing are almost without limit. Garment construction, alterations, wearable art, embellishments, embroidery, applique', dolls, vintage creations, thread painting, quilt piecing, quilting, home décor, wall hangings, heirloom, and crafting are just the broad categories. The number of specializations within the sewing hobby are as big as the world of imagination. Beginners and experts alike continue to be amazed by the amazing possibilities available through sewing.

But we are adults. Show N' Tell is fine for five year olds, but how does that apply to adults.



Sewing Show N' Tell is a fun and exciting gathering. People interested in some area of sewing come together for the purpose of sharing their creative results, seeking inspiration and new insights about their hobby, and encouraging one another to expand their sewing skills, knowledge, and activities. It may be called a club, a round robin, a group, a gathering, meeting, or even a party. It may be organized by friends, sponsored by churches or other non-profit organizations, hosted by sewing retailers, or developed by a sewing teacher. There is no single set up or design for a Sewing Show N' Tell.

Sewing Show N' Tell is for youth and/or adults who love to sew, want to learn, desire inspiration, and are willing to encourage others. The goal is to share passion for sewing.

At our Sew And Quilt Stores in central Texas, we have dozens of groups that include Sewing Show N' Tell ingredients. For example, each store has a monthly program we call Sewing Club which is a sponsored Sewing Show N' Tell group with a general focus on sewing including any areas of sewing that the participants are interested.

Our sponsored Sewing Club is attended by people who love sewing including beginning sewers and experts; hobbyists and professionals; quilters and sewing teachers; young and more mature. Attendance runs from five or six up to fifteen. The group is hosted and led by store owners, educators, or technicians. While there is flexibility, and there are some differences from one store to another, each group includes a short demonstration of a new sewing technique, introduction of new sewing products, and often a project. The majority of the time, however, is spent sharing projects, techniques, and ideas among the participants. Often attendees will have questions or challenges. The group provides encouragement and help from the rest of the group.

How can you find a Sewing Show N' Tell?

First, it is highly likely that a Sewing Show N' Tell is meeting in your area right now. If you live within a few miles of a large town or larger community, you can be confident they exist, but it may not be a snap to find them.

Traditional ways to find things probably won't work. It is highly unlikely that you will find a group listed in your yellow pages, local internet search, or even associated with the fabric shops. Sewing Show N' Tell groups seldom advertise on billboards, TV, or radio. Most Sewing Show N' Tell groups are independent and small (less than fifteen members). Most have only limited if any affiliation to any regional or national association.

Finding a group, however, is not as big a challenge as you might think.

Try contacting your local church if you live in a more rural area. Local ministers, pastors, and priests often are aware of lots of small groups beyond the standard Bible groups. Church women's groups frequently sponsor groups with special hobby interests.

Try looking in your yellow pages for your local sewing machine dealers. The greatest source in your region for sewing expertise, sewing classes, and sewing groups is the sewing machine store. Most sewing machine stores have expert sewing teachers as well as excellent technicians, but they also actively support, sponsor, and encourage everything to do with sewing including promoting Sewing Show N' Tell groups. Often local quilt guilds and chapters of the American Sewing Society have programs that either support or sponsor sharing groups. Your local sewing machine store personnel should be able to put you in contact with such groups.



Finding a group may not be as difficult as finding a group focused on your specific area of interest. For example, if your area of interest is Heirloom sewing, you may find a dozen Sewing Show N' Tell groups in your area focused on paper piecing, general quilting, embroidery, clothing, or home decor. If you discover you can not find a group focused on your specific area of interest, you might consider joining the next best thing or a group whose focus is as close to what you are looking for as possible. Or, you might consider starting your own Sewing Show N' Tell focused on your special area of interest.

How To Set Up Your Own Sewing Show N' Tell?

First, you have some decisions to make. What is the intended point of focus or emphasis for your group and how do you choose your focus? Will you want or need sponsorship? How many participants do you need for your group? How is your group going to be organized? Who will lead your group? Where will you meet? What are the costs you can expect? Where do you find people to join your group? How get started, and how do you keep the group going and growing?

What is the intended point of focus or emphasis, and how do you choose it?

Ask yourself, what do you enjoy about sewing? Do you enjoy clothing construction, patterns, alterations, embellishment, wearable art, embroidery, applique', lace work, heirloom sewing, quilting, paper piecing, wall hangings, home décor, crafting, doll making, or some other even more specific area of sewing? Or do enjoy everything about sewing? Your group will need to enjoy the same things if it is to be successful. Indeed, the question of what you enjoy may not be the right question at all. A better question might be, what are you passionate about? Your group will be all about sharing your passion!

Often it is easier to broaden the focus to include more people, than to restrict your group with overly narrow limits. For example, you might have interest in making decorative purses. Ask your self what associated projects might be included in a group of sewers with some interest in hand bags? Is it possible your group could include a more general focus on accessorizing with purses, hand bags, travel bags, business cases, decorative boxes, book covers, etc.? Remember, your Sewing Show N' Tell needs to have a large enough scope to keep new ideas streaming. If the focus is

too narrow, you might find your group fizzling because it runs out of creative ideas.

What happens when there is no focus? Try to imagine your group has eight members. You come together monthly to share your accomplishments and ideas. One member shows six pot holders. Another shows a queen size memory quilt with intricate designed blocks. Another shows a lacy heirloom pillow case. Another shows a picture of a chair she upholstered. Eight participants share eight totally different projects in totally different areas of interest. Is there a chance, that someone is going to get bored when looking and listening to all the endless details of a project in which they have no interest? When a group is designed to be all inclusive, it is often very difficult to keep the individual participants satisfied. There are some general areas of sewing interest that might have greater success than trying to be everything to everyone.

When selecting a general theme for your group, the traditional areas of interest include: Clothing Construction, Embellishment (Applique, Wearable Art, and sometimes embroidery), Embroidery, Quilting (General, Paper Piecing, specific quilt projects), Home Décor (Window Dressings, Table Coverings, Wall Hangings, etc.), Heirloom Sewing (Delicate Lace and Victorian Recreations), and Crafting. Any one of these would make a great theme for a group as long as the group members understand the focus and are passionate about it.

Will you want or need sponsorship? What is sponsorship and how does it work?

A sponsor is an individual or group that endorses, promotes, and supports your group. The Sew And Quilt Stores sponsor several groups. The store provides a convenient and comfortable place to meet, a hostess, refreshments (may or may not), and a general framework for the group. The store promotes the group to all its

customers and encourages them to plug in. The store listens to the interests of its customers and even creates new groups to bring people of similar interests together. The store takes responsibility for contacting and supporting group members with email notices and phone calls.

Many churches, sewing guilds, quilt guilds, and fabric stores sponsor sewing groups as well. The sponsor may do a lot or very little to support the group. Sponsorship may include a posting on a bulletin board and a general recognition that the group exists. The sponsor may provide money, promotion, a place to meet, instructors, hostesses, etc.

If your group is going to be sponsored, it is vital that you understand what the sponsor is committing to do and what responsibility you and your group might have to your sponsor. For example, if your sponsor is a church, it is expected that the group demonstrate sincere respect for and appreciation for the church. That does not mean that every participant has to be a tithing member of that church, but the more the group does to show loyalty to the sponsor the more willing the sponsor will be to dole out more support.

Often the sponsor will have specific expectations or demands of the group. For example, those groups sponsored by Sew And Quilt Stores are expected to promote its products not the products of some competitor. Do your members buy thread? Buy it the day you meet to show your support for your sponsor. Do you buy other products your sponsor sells? Then show loyalty in your purchases. It is really disrespectful for a member of a group meeting at one sewing machine store to promote the products at another store or to criticize the sponsor's store for not having some particular product. It is important to respect and cooperate with your sponsor. Know what they expect, and do all you can to get your group to exceed those expectations.

You may decide that you do not want sponsorship. That is OK. Independence has its benefits too. If you do not work with a sponsor, you are free to meet whenever, wherever, and with whomever you please.

How many participants do you need for your group?

This is an age old question. How many is a group? How many people are too few and how many are too many? There certainly must be a bunch of opinions on this. Some might say, "Where two or three are gathered..." Another might insist, "There is not limit..." Behavioral scientists have discovered some interesting things that might be worthy of consideration. First, if you are alone, you can talk to yourself all day long, but you only get one opinion. Second, when you have three, you usually have a spare tire. Third, when you have more than fifteen, the talkers dominate and the wall flowers wilt. So, how many people is just right? Generally, the group dynamics experts recommend small groups between five and twelve as optimum. If you have fewer than four or five, someone usually gets left out. When the numbers grow beyond twelve to fifteen, several people will get left out of the discussions and become spectators while the talkers dominate.

Another factor in this consideration is the issue of group leadership. Who is going to lead the group? Forget it! Everyone can not be leader. Someone must do the job. If Everyone does the job, Nobody will do the job. It may come automatically or it may be designated, but someone has to lead or nothing will get done. If you are going to lead the group, ask yourself the practical question: "How many people can I really handle?" If someone else is going to lead, ask the same question for them. Remember, the Goal of a Sewing Show N' Tell is to share your passion for sewing.

How is your group going to be organized? Who will lead your group? How?

There are many different ways to organize your group, but the key underlying your choices for organization is the goal or purpose of your group:

"Sewing Show N' Tell is for youth and/or adults who love to sew, want to learn, desire inspiration, and are willing to encourage others. The goal is to share passion for sewing."

With your purpose and goal clearly in mind, what is the best way to organize your group? Stating it a little differently, how can your group organization insure that you meet your goals and satisfy your purpose?

Here a few options:

1. Hostess Led meetings in a sponsored location.
2. Teacher Led meetings in a classroom setting.
3. Chair Led meetings in a Robert's Rules of Order setting.

Hostess Led implies that someone is responsible for setting up the meeting for guests to participate. This works great whether you are the hostess of your own sponsored group or someone else representing the sponsor hostesses the group. The hostess greets the participants, helps make them feel at home, get settled in, and generally create a positive environment for the group. Once the group is ready to begin its meeting, the Hostess officially welcomes everyone, explains the plans for the day, and introduces the first speaker or presenter. The hostess may actually begin the process by sharing some special project, new product, or other item of interest before introducing other to share. The group may have a guest presenter (introduced by the hostess) who comes as an expert of otherwise distinguished person. As each presenter ends their presentation, the Hostess affirms and introduces the next presenter. Once all

presenters have made their presentations (or at the end of each presentation), the hostess will moderate questions and answers or perhaps open the group to discussion. At any point that a participant become unruly, overly long winded, disruptive, or needs other encouragement, it is the responsibility of the hostess to manage the situation on behalf of the group.

Teacher Led or Expert Led groups are more like a classroom activities. The expert or teacher serves as the hostess carrying out all her responsibilities, but adding an ingredient of instruction. In the Teacher Led model the purpose and goal set forth for the sharing group remain, but a second goal is added. The group aims to learn new skills, new techniques, and new information from the gathering as well as sharing. In this model, the teacher may make recommendations, explanations, or corrections as needed to insure learning.

Chair Led implies a group governed by the principles of Robert's Rules of Order. The Chair person may be chosen by the group or otherwise emerge to this responsibility. Unlike the hostess, the Chair remains simply as a traffic cop or steering wheel. The Chair usually sacrifices their personal contributions in order to insure that all participants receive their allotted time and privilege. Once all participants have concluded their contribution the Chair may add some personal contribution or close the session. Maintaining order is a primary concern in the Chair Led structure.

You probably already have your own favorite way to organize your group, and you may have you own ideas of what may work. Feel free to experiment. Just remember whenever you have more than one person involved in anything, you usually have more than one opinion about everything. Try to set a clear structure for your meetings that includes flexibility, but maintains a smooth operation flow.

As you plan your group structure, always remember your goals.

If you are going to work with a sponsor, your planning must include discussions and considerations with that sponsor. Prevention of problems is always better than solving problems after the whole world has collapsed.

Where will you meet?

Groups need a place to meet, but your options a huge. You can meet in your living room, at a local restaurant, at a public library meeting room, at a local sewing machine store, and you can probably think of a few dozen more possibilities. What kind of place would be best? Do you need to set up sewing machines? Do you need display space? Do you want supplies handy? Do you need expert assistance? Just what kind of place is best for your group?

What are the costs you can expect?

In an ideal world, we would make a wish and the genie would instantly grant our wish no strings attached – without cost or consideration. As you plan your group, anticipate the needs, costs, and considerations needed to get started and to maintain a healthy group.

Have you ever noticed that every little thing has a price tag? Sometimes the tag is stamped right up front. Sometimes it is hidden. Recently, I contacted the manager of an apartment complex about using their meeting room. He informed me that the cost would only be \$25 for the whole day. I was all excited. A week or two passed and I was sure that I had found the right place for my meeting. Sure beats the \$95 at Holiday Inn. Then I stopped by to take a good look at the meeting room. The manager informed me that he only had five folding chairs, a six foot folding table, and no PA system. Ouch! Where was I going

to find chairs, tables, and a PA system? How much was that going to cost me? That Holiday Inn began looking a whole lot better.

If you decide to meet in your sewing room or living room, what costs will you have? Someone is going to have to clean up and set up before the meeting. Someone is also going to have to clean up and take down after the meeting. Who do you think that someone might end up being? You may not notice the slight increase in utility bills for a monthly meeting, but a weekly meeting might start being noticed. What about parking?

If you decide to meet at a local church or public library, will your group be expected to make a donation of say \$25 or \$50? What expectations will they have on your group?

If you get a sewing machine store to sponsor your group, you may escape all the direct expenses, but what does the store expect from your group? If your group fails to meet those expectations, how will the relationship between the store and the group develop?

If you decide to offer refreshments, what will they cost? Who is going to pay the bill?

If you decide to bring in an expert or educator as a guest or as a regular part of your group's activities, what will it cost? Who is going to pay the costs?

Create a plan for your group including a detailed budget showing all the possible costs you might face and a plan to pay for those expenses. This does not have to be expensive. You don't have to mortgage your home or sell one of your children. It is likely that you can develop a workable plan in which you get all the benefits you desire for a hand full of dollars per meeting to be shared by the participants. The important things here is to anticipate and plan. Act on facts not wishes.

Where do you find people to join your group?

You could attend your local High School football game, and stand up with a megaphone inviting anyone who is interested to meet you after the game. You could rent an ad in your local newspaper, radio, or TV. You could lease a billboard on the highway coming into town. You could sign up with the Welcome Wagon and pay a dollar or two for each new resident in town. I just don't recommend these approaches, because they cost too much and probably won't work anyway.

You may already know two or three people who would be interested in your group. Do not hesitate. Approach them and explain your vision. Invite them to help you build your group. You will be surprised how much faster things go when you have a few key friends to help at the very beginning.

Where do you find people who already share your interests? Maybe you have a local fabric store, or one of the Big Box Merchandisers with a fabric department, or a parks and recreation sewing group, or a sewing machine store, or a ladies group at church. Go where you get your supplies and support for your hobby, but don't go shopping for supplies. Go shopping for people who share your passion. Ask the workers, or leaders about people they know who are interested in your area of interest.

If you have found a sponsor for your group, ask them for help promoting your group. Remember, the ideal size of a Sewing Show N' Tell group is eight to ten people. You don't need a hundred. You don't need everybody. You only need that special group of people who will enjoy sharing your passion together.

When you find one person with whom you can share, make that person a true friend. Get them to bring people

they already know. When each one brings one, it only takes your finding four people to have all you need.

How to get started, and how do you keep the group going and growing?

You have already decided what the focus and emphasis of your group will be. You know your purpose and your goals. You have decided to find a sponsor or not. You have explored the best way to organize your group. You have figured out where your might meet your group. You have a plan in place to anticipate costs and meet those costs. You have a plan for finding members for your group. Now it is time to get started.

That is right. You have already done the hard work. Making the decisions and creating a solid foundation is always the biggest part of the work.

Now you must act.

If you are working with a sponsor, you need to set up a formal arrangement with your sponsor so everyone will know what to expect. Work with the sponsor on all the details: when, where, how, what, etc. Leave nothing to chance. Hard feelings mean bad luck. In most cases, I would recommend writing everything on paper and having the sponsor and yourself sign and keep a copy. As you build your group, the members of the group must be informed about their duties and responsibilities to the sponsor. Regardless of what your sponsor may do or not do, always do more than what is expected and you will get more then you ever asked for. Set a target date to begin.

If you are not working with a sponsor, set your own target date and make your own arrangements needed to implement your plan. Unless you have a target date, place,

time, and plan of action; you will most likely fail to get started ever.

Act. The reason most jobs don't get done is that they never got started.

How do you eat an elephant? One bite at a time. How do climb a mountain? One step at a time. How do you build your group? Act on you plan step by step until it is finished.

Once your group of four or five participants gathers for their first meeting. Explain everything. Explain your vision. Express our passion. Describe your plans for how the meetings will operate. Detail the expectations of each member, their duties, their costs, their rules of conduct, and their benefits. The first meeting is always crucial to get everyone on the same page ready to work together. Be sensitive to concerns, points of discord, spoken and unspoken issues.

Whenever a new member joins the group, take responsibility for repeating meeting one and any organizational changes one on one with the newcomer. It is vital that every participant understand the purpose and goals of the group and be committed to working as part of the group. Make newcomers feel welcome and truly part of the group.

Periodically, review the purpose, goals, organization structure, and group responsibilities with the whole group. It is not necessary to harp on things, but it is necessary to keep the group focused on the vision. When the vision of the group becomes blurred, the group gradually begins falling off. When responsibilities go unmet, it can create tension and discord within the group.

If your group grows beyond twelve members, plan to start a second group. When a sharing group exceeds twenty participants, it no longer is capable of functioning as a

sharing group. The group may continue to meet, but it will transition into a group dominated by one or two key individuals while leaving many of the group to sit like wall flowers.

To start a second group, it is necessary to form a nucleus of four or five members who can then invite and recruit additional members. The group may maintain the same focus as the original or it may launch into new territory. The essential ingredient is that each group clearly understand its purpose, goals, and focus. For a time certain members may choose to participate in more than one group. The key is sharing your passion for sewing.

The second group will grow, but the original group will fill in their spaces very quickly. The result is the passion for sewing grows and expands throughout.

What kinds of projects could be shared in a Sewing Show N' Tell?

The following photo gallery is a collection of projects from different Sewing Show N' Tell groups each with their own special passion for sewing. Make a list of projects you would like to do, and share your exciting results with others. Always remember, it is all about sharing our passion for sewing.



People love sharing their creations.



This is a sample of Ghosting designed and originated by Mr. Stephen Weathers lead technician at Sew & Quilt Stores in central Texas.



Purses are all the rage right now and we have seen many different kinds, shapes, designs, colors – wonderful!



Patriotic Themes are always popular like this one we saw at a Baby Lock convention in St. Louis, Missouri.



Home Decorating is Hot! People love special creative touches, and they love to share their favorite results with others.

Heirloom masterpieces are powerful reminders of the past, of family and friends, and of beauty. Try your hand at a masterpiece with lace and more, and share it.

The possibilities of Sewing Show N' Tell groups are endless. Find a group of people who have a sewing passion like yours. Bring them together to share. Learn from each other. Encourage and uplift one another. Never ever let anyone discourage you or rob you of the thrill of your creative possibilities.



CHAPTER EIGHT

UNDERSTANDING FABRICS

KINDS OF FABRIC



Choosing fabric requires that you understand a little about fabric. Not all fabric is the same. Not all fabric sews the same. Fabric comes in many different sizes, textures, compositions, and constructions. Your pattern will usually suggest fabric options to you for the specific project, but it is important to understand the basics.

Natural Fiber Fabrics: Natural fibers "breathe", but wrinkle. Sources of natural fibers include animal skins, animal hair, animal proteins, vegetable and other crop fibers. Leather is made from animal skins. Vicuna, cashmere, and camel hair are made from animals. Wool and mohair are made from the fleece of sheep and goats. Silk is made from



filaments or protein fibers produced in the cocoons of the silkworm. Cotton is made from a vegetable crop grown in the fields, picked or harvested, and processed to make cotton. Linen is made from flax a crop grown like cotton.

Some natural fibers are so processed; they are described as man made fibers because of the extremes taken to process them. They include Rayon, Viscose, Acetate, and Triacetate.

Each type of fiber has its own characteristics. Wool gives warmth, but shrinks when exposed to moisture and heat. This quality makes wool a great fiber for men's suits because it is easily molded to fit. Linen is soft and absorbs moisture but it wrinkles easily. Silk dyes well, but easily water spots. Cotton is soft and comfortable.

Synthetic Fiber Fabrics: Synthetic are man made fibers like polyester, nylon, ninyl, metallic fibers, and glass. These fibers are produced directly from man made chemical processes. They do not "Breathe" or wrinkle.

BLENDs: To make things even more complicated, manufacturers are always doing interesting things to improve the character of different fibers. One of the most popular combinations is the blending of cotton and polyester. While the breathe ability of cotton is desirable, it had a terrible tendency to wrinkle. Polyester, however, does not wrinkle. Blending them makes a great wrinkle free breathable fabric.

CHOOSING THE RIGHT FABRICS

Choosing the right fabric is always a bit of a challenge. Fabrics are made differently, woven differently, have different features, and in many cases require special consideration in terms of sewing with the different fabrics.

For example, when sewing on woven fabrics you will use a universal or sharp needle, but if you change to a knit fabric, you will be frustrated by skipped stitches and poor seams. To sew on the knit you will need to change your needle to a ballpoint or stretch needle. Perhaps for this reason many beginning sewers choose a type of fabric and stay with it for all the different projects.

Here is a very limited glimpse at some of the different fabrics available to you today.



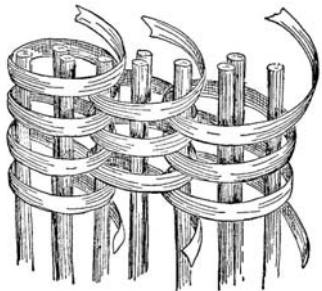
SAMPLE FABRIC CHART

Natural Woolens	Natural Silk Organza	Natural Cotton Broadcloth	Natural Satin Cotton
Man Made Rayon	Natural Sweater Knit	Rayon Linen Blend	Felt

Synthetic Patent Vinyl	Silk Taffeta	Synthetic Stretch Vinyl	Synthetic Pleated Polyester
Synthetic Sequined Fabric	Synthetic Poly Stretch Velvet	Synthetic Acetate Lining	Tapestry

When you go fabric shopping, make it a habit to collect swatches (small sample cuts) of different fabrics. Label them and create your own swatch book. This will be a fabulous reference tool for you when you start planning your many projects.

HOW FABRICS ARE MADE

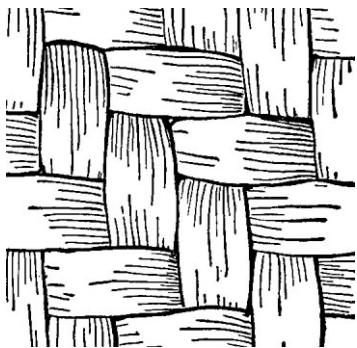


Fibers Are Processed stretched and twisted to form threads of yarn. Strands or threads of these filaments vary in length (staple) from tiny pieces up to hundreds of feet long. These filaments are "carded" or combed to remove foreign matter from the yarns.

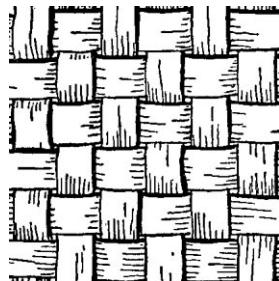
Some fabrics are woven without further processing producing super soft fluffy fabrics (woolens for example). Most fibers continue processing through combing to refine the threads. Once ready the fibers are spun or twisted into yarn to make the yarn stronger. The yarn may be single strand, two ply (strands), or three ply. Some yarns are blended or have added fibers added to the mix forming combinations such as silk and wool blends, blending may also involve combining natural and synthetic fibers like cotton and poly blends. Once blended and processed, the

yarn is sometimes coated (sized) with starch-like compounds for protection during further manufacturing. These yarns are then woven or knitted into fabrics.

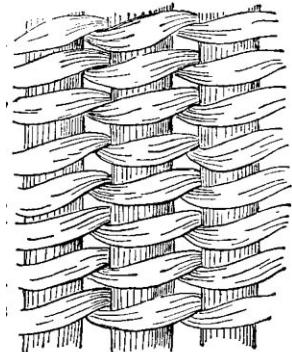
Weaving the Fabric involves yarns being stretched lengthwise and crosswise of each other. The longwise yarns are called the warp yarns, while the crosswise yarns are called the weft or filling yarns. These yarns do not necessarily have to be the same yarns.



The texture of the fabric will depend on the yarns themselves as well as the way they are woven together. A Plain Weave simply alternates over and under like in burlap,



canvas, challis, cheesecloth, muslin, organdy, and percale. In a Basket Weave two or more yarns are used for both warp and weft like in basket-weave woolens, hopsacking, or oxford cloth. When multiple yarns are used in one direction, it forms a nap and called Rib Weave like in broadcloth, faille, grosgrain, ottoman, and poplin.



Twill like covert, denim, drill, serge, and gabardine are produced by the weft yarn aligning diagonally creating ridges or wales with a steep angle. Herringbone is similar but changes the direction of the weave periodically. The smooth shiny finish of satin is achieved by long closely woven warp yarns, varied so no surface pattern emerges (Satin Weave). Pile weaves create distinctive pile on the surface of the fabric like with Velveteen and Corduroy (cut pile).

KNIT. Polyester for example often knitted to form what is called polyester knit. Knit fabrics were a huge success for a time because the fabric stretched easily, making a super comfortable fit. It showed no wrinkles (but did not crease well). The fabric was like iron super durable. Unfortunately, in the winter the wind blows straight through

and it feels cold; and in the summer the fibers feel super hot. It has been made into all kinds of garments for men and women. Knitted fabrics may be single (weft) or double knit with interlocking layers.

Some fabrics are manufactured through bonding fibers under chemical, heat, moisture, adhesives, and pressure applications. Fabrics like felt, non-woven, and laminated fabrics are produced in this manner including polar fleece and pellon.

Greigh Goods. Before the final finish is applied to the fabric, it is called greigh goods. The thread count and quality of the greigh goods determines the ultimate quality of the fabric. Once fabrics are printed or treated with final finishes most people can not tell good fabrics from poor fabric just by looking. Durability, sew ability; straight grain-line, and the feel of the fabric quickly appear after washing and limited wear. While the quality of most fabrics is not labeled, you can get an idea of this truth by looking at sheets at the mass merchandiser. Some sheets are marked "150 count" or "250 Count" or "400 Count". This is the count of threads per square inch. The more threads the better the sheets. The same is true of other fabrics, but it is more difficult to judge.

Buy Value. Rest assured the price differences on fabrics that look alike actually reflect the quality or lack of quality in the greigh goods. The fabrics may look the same; but after you have poured out your heart and time making something very special, you will quickly see the difference. Often, the greigh goods used by many mass merchandisers are 30 to 40% thinner and weaker than fabrics found in specialty shops.

Test Your Fabric. To some degree you can evaluate the quality and content of the fabric by doing the following:

Find a dependable fabric outlet with a solid reputation of selling only top quality goods. Buy quality and value. Many of the larger fabric chain stores have emphasized price and sales of 40 to 50% off, but avoid buying just for price, because you usually get what you pay for.

Lay out a full spread of the fabric and closely examine the grain and crossgrain of the fabric. Some poor goods are made off grain.

Experiment by stretching along the lengthwise grain-line, crossgrain, and bias of the fabric to make certain the fabric is good enough to bounce back and not quickly lose its shape.

Feel the fabric for density, if it seems thin, it probably is. Hold it up to the light and see the warp and weft of the fabric.

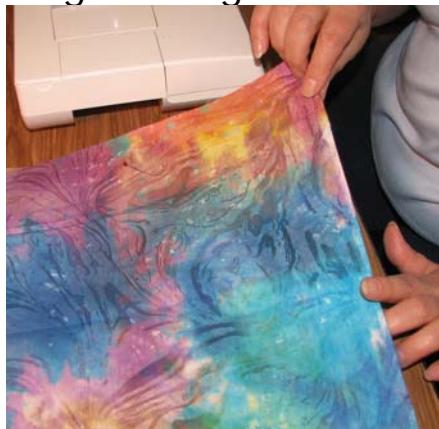
If a fabric is not labeled, you can apply the flame test to determine what it is primarily composed of. Generally, natural fibers burn and synthetic melt. It is best to do this test on a swatch at home. Do not try this in the fabric aisle of Walmart.

Using quality fabric will always produce better projects that last longer and feel better.

GRAIN LINE & BIAS

Three terms are very important in sewing frequently used in pattern reading, project layout, and general sewing. The terms are Grainline, Crossgrain, and Bias.

Grain has nothing to do with corn. Grain is all about the weave of the fabric. Woven fabrics are constructed of threads crisscrossing each other to form the fabric. When you examine a piece of fabric, notice the lengthwise line of the weave moving along the fabric. Running lengthwise between the two selvages (raw fabric edges) is the lengthwise grainline or simply grainline.



Threads across the fabric from selvage to selvage are called crossgrain. Perpendicular or across the fabric lengthwise grainline lies the weft of the fabric also known as the crosswise grain. The crosswise grain always has more stretch or give than the lengthwise grain. One way to identify the grain of a fabric is to hold it up selvage to selvage and gently pull. Then hold the fabric 90 degrees offset and repeat the gentle tug. You will note some slight give on the lengthwise grain, more stretch across the grain (crosswise grain), and the most stretch is the diagonal stretch known as bias.



True bias runs at a 45 degree angle across the crosswise and lengthwise grainlines.

When you see the terms grain, grainline, lengthwise grain, or lengthwise grainline, they are the same threads that run the length of the fabric and have the least stretch. Crossgrain, crosswise grain, and crosswise grainline all refer to the same threads that run perpendicular across the length of the fabric and have more stretch than the grain. Bias is usually referred to simply as bias and refers to the diagonal of the fabric which has the greatest amount of fabric stretch.

REVIEW:

Grain: (Grain-line, Lengthwise of Grain, Straight of Goods) are the threads running the length of the fabric.

Cross-Grain: is the threads running ninety degrees across the fabric from selvage to selvage or edge to

edge.

Bias: is the diagonal of the fabric running 45 degrees or catty-corner across the fabric.

Shrinkage & Bleeding Factors

What could be more devastating than to spend ten hours planning, laying out, cutting out, sewing up, and finishing a beautiful garment or other project only to see it shrink the first time it is washed. Or imagine creating a beautiful red blouse and watching it turn pink the first time it gets wet.

PRESHRINK: Before You Use Any Fabric, preshrink it. This is especially true of natural fibers. What could be more devastating than to spend ten hours planning, laying out, cutting out, sewing up, and finishing a beautiful garment or

other project only to see it shrink the first time it is washed. I remember my older brother Dennis had this beautiful slip-over sweater. Everybody bragged about it. One day my mother accidentally tossed it into the washer with other laundry and when it came out of the dryer... well you can imagine. My brother is eight years older

than me, and the sweater was even too small for me. My brother was certainly not happy, but it was funny to see that large man's sweater mysteriously turn into



a perfect doll's sweater.

Natural fibers tend to shrink whenever exposed to heat and moisture. Wools are especially problematic. Cotton fabrics shrink too. Although, cotton does not typically shrink to the degree that wool does, even a little shrinkage can alter the fabric significantly. Cotton is a natural fiber produced from a plant grown much like soybeans in fields by farmers. The fibers are processed, stretched, pulled, and straightened. Various coatings are applied for stiffening to the fibers and threads produced.

These threads or yarns are woven together to form the cotton fabric. Exposure to heat and moisture causes the fibers to relax or go limp like the original state of the fiber. This is the shrinkage process. Some of the newer natural fabrics have been processed to limit or prevent shrinkage, but "it is better to be safe than sorry".

Washing the fabric in a washing machine causes the materials to absorb moisture. The result is shrinkage. Applying heat in the dryer amplifies the problem. The amount of shrinkage varies from fabric to fabric. If you can imagine, you just finished a queen size quilt. It has taken maybe a hundred hours of tender loving sewing. You neatly laid the finished quilt over the back of the couch. A few days pass and the grandchildren come to visit. One of them comes in and jumps up on the couch with his dirty shoes and the dirt goes straight on to the your magnificent quilt. You quickly try to rescue the quilt, but it is soiled, maybe permanently. What are you going to do?

Obviously, the solution is to wash the quilt, right?

Sure, but only if before you ever started sewing you fully prepared your fabrics. If not, ouch!

When cotton is exposed to moisture and heat, it not only shrinks it does so in unpredictable and inconsistent

ways. If you have a whole quilt of different cotton pieces, you may get a bunch of puckers, pulls, and distortions. This is due to the irregular ways cotton shrinks.

Some quilters prefer to use unwashed fabrics during construction of the quilt, and then do a careful moistening and stretching in an attempt to control the shrinkage while producing an appearance of aging. This can also be done with other projects like shirts and pants.

It is usually best, however, to do a pre-wash or pre-shrinking of fabrics so the finished product will have a much more polished appearance. At least test the fabric, before spending endless hours making a project that will disintegrate on the first washing. If you have any question at all, Before You Use Any Fabric, Preshrink It. This is especially true of natural fibers.



PREWASHING accomplishes several things at once. It removes the excess chemicals, sizings, protective coatings, debris, and loose fibers. These excess chemicals can be big irritants if you are sensitive. Their touch, sell, and feel can make working with the fabric a challenge. After washing, the fabric is far easier to handle.

It removes some of the crispness of the new fabric. The fabric takes on a bit softer appearance, but if you prefer that crispness of new fabric, it can still be yours. Just use a can of spray starch or sizing and spray a light mist over the fabric. That crispness returns. Now you have control over the chemicals. Take a look at the ingredients label to see exactly what chemicals you may be adding. Choose a spray that is less irritating by scrutinizing those ingredients.

It allows the fabric to shrink before it is sewn. Once the

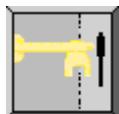
fabric shrinks, it may shrink more when further exposed to moisture and heat, but the shrinkage is significantly reduced.

Here are some simple steps to prewashing: Use a large washtub, large dish pan, bathtub, or clothes washer. Fill it and prepare a cool washing solution of premixed mild detergent, Ivory Soap Flakes (not powdered detergent) or Orvus soap. Never use any soap containing bleach or other harsh chemicals that could ruin your fabric. Thoroughly stir the soap in the water so it completely dissolves before adding fabric. Check with your sewing expert at your closest sewing center or quilt store for more details.

Unfold the fabric to be washed. Gently place the fabric into the washing solution. Push it down into the water. Soak the fabric thoroughly. Gently agitate or swish the fabric by hand or by machine using maximum delicate cycle. Do as much soaking as washing. Thoroughly rinse the fabric to remove all the detergent or soap.

Air dry at room temperature or dry in a clothes dryer at low heat and use the delicate cycle. Remove the fabric from the dryer as soon as the fabric is dry.

Once the fabric is thoroughly dry it may be pressed with an iron, but it is usually optimum to do so just before you begin cutting and sewing with the fabric. Pressing should be done with a hot dry iron to press out the wrinkles from the fabric. Once done, the fabric is ready to cut and sew.



Testing Prevents Problems: If you believe your fabrics are not going to shrink significantly, it is not always necessary to pre-wash them. In many cases you can test a square piece of the fabric and measure the shrinkage factor. If it is less than ten percent, you are probably ok.



PRESHRINK: You may also preshrink instead of washing the fabric. To preshrink or prepare fabric for sewing, dampen the fabric. Stretch it out so it can dry thoroughly. Some fabrics will shrink five to ten percent the first time they are washed. Preshrinking will safeguard further shrinkage. Some fabrics shrink far more than others. Wool has the reputation of a shrinking "violet", but preshrinking and pretreatment will go a long way to prevent massive shrinkage. Some fabrics are labeled as pre-shrunk, but otherwise preshrink. Some better fabrics in specialty shops are designed to minimize shrinkage, color fade, and similar deterioration through laundry. Always check the laundry instructions and follow them explicitly.

Other problems can also sometimes be averted during the fabric preparation process. Sometimes fabrics are not as color fast as desired. You may add color stay to prevent discoloration later during the preshrink fabric preparation process.

Prevent Bleeding: Sometimes when some fabrics get wet, they bleed. They are said not to be color fast. Fabrics that do not bleed are described as color fast. Natural fibers are more vulnerable to this problem than synthetic fibers because of the manufacturing process.

Bleeding is especially noticeable with reds. If you spend many hours creating something wonderful and then wash it, some terrible things can happen. If your fabric has not been prewashed and the colors set, the vivid red and purple dyes may well bleed all over the rest of the quilt ruining it. So, prevent bleeding. No, don't use bandaids. They don't work.

Caution: anytime you use a fabric with really deep reds, purples, or other colors; test it for color fastness or bleeding.

Use A Bleed Test. Double Check before using a fabric to insure that it is color fast (won't bleed) by using a bleed test. Cut a two to three inch square piece of each fabric you plan to use. Mix some washing solution in a large dish or pan, pour in a water soap solution just like you would use in your washer to wash the quilt in the future. The temperature should also match your washing situation as close as possible. Set the square of fabric into the bowl or pan of washing solution. Make sure you dunk it so it really gets wet, and doesn't just float on top of the water. Wait thirty to forty five minutes or so. Check the color of the water. If the water has a colored tint, the fabric was not color fast. It did bleed. . If the color of the water was clear, it does not necessarily mean that the fabric is colorfast. To double check, take the fabric out and lay it on a piece of white paper towel. Wait a few minutes. Lift the fabric piece. Is there color on the paper towel? Yes, then it may still bleed onto other fabrics in the quilt. No, then it is likely colorfast.



Prevent catastrophe by pre-treating the fabric with a color stay product. . A cap full of Synthrapol or similar product (read directions on bottle) per load of wash will usually clean away loose dyes preventing most bleeding, but may not prevent all transfers from actual contact with another fabric. In the worst cases, it may be necessary to treat the fabric with a dye fixative like Retayne to set the dyes. Once you have treated the fabrics, do another bleed test just to be sure.

If the project is already assembled (sewn together) without having been pre-washed; perform the bleed test before washing. The bleed test should be done on each of the various fabrics in the finished quilt especially those with bold colors. Use a cotton swab or cotton ball. Dip the cotton swab into warm water and rub it on the fabric pieces. Saturate the fabric with the water, but do not soak the quilt. Test the top layer of the fabric only. Avoid soaking the other

layers of the quilt. Inspect the cotton for any color transfer. If the cotton changes color, it will likely bleed if you wash the quilt. If you see no color transfer, there is still a chance that if the quilt is exposed to a full soaking, soap, and heat; it may still bleed.

Other problems can also sometimes be averted during the fabric preparation process. Sometimes fabrics are not as color fast as desired. You may add color stay to prevent discoloration later during the preshrink fabric preparation process.

STARCHING: When you are planning an embellishment project it is a good idea to starch the material before doing the embroidery or embellishment. This prevents the fabric from stretching during the embellishment process, and leaves a beautiful finish.

Sewing Techniques For Different Fabrics



There are hundreds of different fabrics among the thousands of different kinds of fabric that you may choose from. As we have already discussed, there are fabrics made from natural fibers, manmade or manufactured natural fibers, and synthetic fibers.

There are hundreds of different weaves and knitting constructions. You can have satin weaves made of cotton, rayon, silk, even polyester. Then there are chiffons, broadcloths, felts, crepes, taffetas, suede, velvets, leathers, vinyl, snake skin, organza, jacquards... Your options are endless.

As you learn to sew and your skills increase, you will gradually learn to recognize the different fabric contents and their weaves. You will become especially accustomed to working those fabrics you use most often. You will also discover special ways to work with each fabric.

When you look for fabric, check the labels for fiber content and weave designations. You will find lots of blended fabrics with polyester and cotton and similar combinations. These blended fabrics are designed to overcome the weaknesses of one fiber with the strengths of the other.

As a general rule, if the fabric is woven and medium weight; use a universal needle 80/12 or 90/14. If the weave is especially tight, use a sharp needle. If the materials are thicker use a heavier needle.

If the fabric is stretchy as knits typically are, use of an universal needle will leave your seems with skipped and distorted stitches. Therefore, use a stretch or ball point needle of appropriate size.

You will also find that some fabrics are slippery, or do not slide easily. Special adjustments to your presser feet, and the ways your feed the material may be necessary. If you have thick multiple layers of fabric, you will likely need a walking foot.

With experience, will come the special skills with regard to specific fabrics.

CHAPTER NINE

What do I need to know about needles?

NEEDLES ARE IMPORTANT

Sewing by definition involves joining pieces of fabric together usually with thread. You use a needle to do the joining.

Needles are in many ways the most important part on your sewing machine. They are frequently the first cause of problem sewing too.

Needles are not all the same. They come in different sizes. They have different needle point types. They are made differently. They are made of different materials. Sound confusing? It can be, but not too bad.

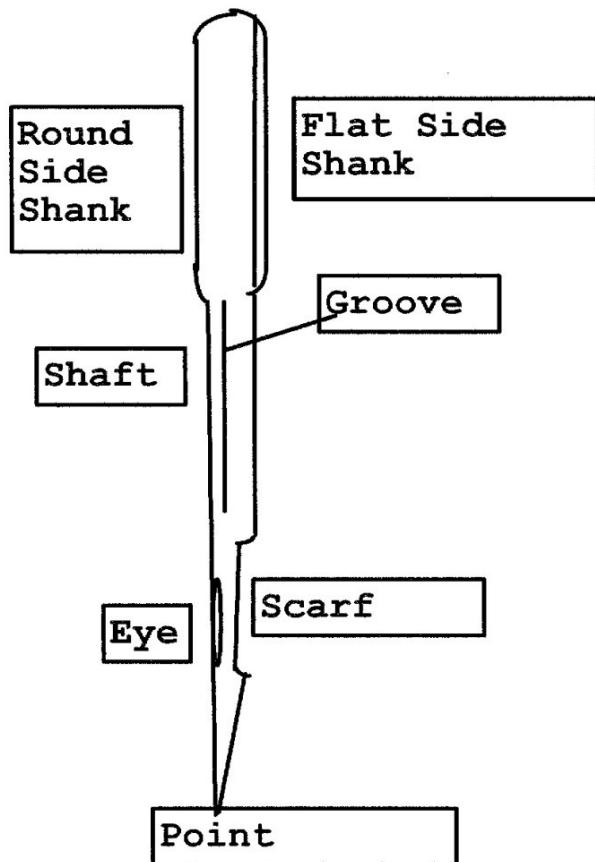


As a beginning sewer, you will need a universal point size 12 needle. You can purchase these from almost any place that has fabric or sewing

machines.

Later you will learn how to use the different types of needles and will need to expand your selection. You can either purchase a prepackaged assortment of the major needle types, or purchase each type separately. As a beginner, it might be preferable to buy the assortment so you will have what you need when you want it.

PARTS OF THE NEEDLE



Notice (on drawing of the needle below), the scarf is a cut out area just behind the needle. As the needle moves down the thread lies smoothly in the groove. As the needle rises, a loop forms in the scarf. The hook snags the loop and proceeds to form the stitch.

While we are considering needles, it is important to keep in mind that today needles are generally standardized by size. (You will notice two systems usually listed on a package of needles together. The Singer or SAE system uses numbers like 8, 10, 12, 14 while the Metric system for the same needles use 60, 70, 80, 90. It does not matter which system you remember, the needles are exactly the same. Size 8 equals size 60, etc. In both cases the larger the number, the larger the needle.)

Please note, the size of hand sewing needles is just the opposite. Hand sewing needles and hand quilting needles are sized with the larger number actually being the smaller needle.

While the sizes of needles has been standardized, the quality and special features have not. Needles will frequently have alpha identifiers to designate special applications for the needle. H stands for Schmetz household or universal needle. HS means stretch needle. SUR is ballpoint. N is Top Stitching. NTW is Leather. Gold or Yellow Band Singer needles may be helpful on specific Singer machines that skip stitches "no matter what".

Manufacturers of needles have discovered that minor changes in how the needle is made can make a huge difference in how the needle performs during sewing. The common areas for specialization have included increasing or decreasing the size, width, or length of the needle eye, scarf, and groove. The thickness of the shaft is also adjusted for certain applications. Finally, the point of the needle is adjusted to meet specific sewing needs.

As an example, a 40 weight general sewing thread will work on all needles 75/11 and larger, but "Schmetz advises that the diameter of the eye of the needle should be 40% larger than the diameter of the thread. Using the rule of thumb, consider a larger needle when using" heavier threads. Also, smaller needles are better when using finer threads.

DIFFERENT TYPES OF NEEDLES:

The Sharp Needle has a sharp point and is great for woven fabrics.

The Universal Needle is somewhat sharp, but not as much as the sharp, and is generally good for most fabric sewing.

The Ball Point Needle is also called a **Stretch Needle** because its rounded tip easily slides through the knit fabric (stretchy fabrics) without snagging. If you use a Sharp Needle on a knit fabric, you will notice skipped stitches, poor tension, and various fabric snags. It is less obvious, but the Ball Point Needle does not do well on tightly woven fabric either.

Top Stitching Needles are generally Sharp Needles with an extra long and deep scarf.



Embroidery needles are more muted tipped needles with a longer more gradual scarf. Denim Needles, Leather Needles, Titanium Embroidery Needles, Cambium Needles and other specialty needles are made extra strong and are designed for their special purposes. It is very important to match the right needle with the right fabric for the right project and use the right sewing techniques to insure optimum quality and ease of sewing.

Twin Needles and **Triple Needles** as well as **Winged Needles** are used for a variety of decorative applications. A

Twin needle is actually two needles mounted on a shaft, while a Triple Needle has three needles mounted on a single shaft. The Winged Needle has a wide blade like wing protruding from both sides of the needle. When the Winged Needle moves up and down it slices a hole in the fabric, which creates an interesting decorative appearance.

There are a variety of other specialty needles which you may discover along the way in your sewing journey.

NEEDLE TYPES

<u>TYPE</u>	<u>DESCRIPTION</u>	<u>USES</u>
Ball Point or Stretch	Rounded needle point.	Knits
Universal	Needle point is less than sharp but not quite rounded.	Woven & Some Knits
Jeans or Denim	Sharp rigid point (less flexing)	Denim
Microtex Sharp	Very sharp thin point and shaft.	Woven Fabrics
Quilting Needles	Thin tapered point.	Quilting Cottons
Topstitch Needles	Large eye, deep groove, sharp point to better hold thread.	Wovens
Embroidery or Metafil	Larger eye, deep groove, larger scarf, special coatings, sharp.	Embroidery
Leather Needle	Wedge shaped sharp point.	Leather
Double Needle	Two needles on single shank. Available for needle point type. Three needles on single shank. Available for needle point type.	Special Applications
Triple or Drilling Needle		Decorative Applications
Wing Needle	Sharp point with metal wedges on 2 sides to spread fabric.	Decorative Applications

NEEDLE SIZE APPLICATIONS

<u>NEEDLE SIZE</u>	<u>APPLICATIONS</u>
9	Very Fine Fabrics: Batistes, Silks, Chiffons
11	Medium Fine Fabrics: Cambrics, Linens, Silks, Muslins
12	Medium Fabrics: Cottons, Blends, Broadcloth
14	Medium Heavy Fabrics: Sheetings, Shirtings
16	Heavy Fabrics: Flannels, Heavy Silks, Woolens

NEEDLE THREAD CHART

Needle Size	Thread Type	Fabric Type	Fabric Weight
18/100 Sharp or U	Buttonhole Twist	General Fabrics	Avg to Heavy (Decorative)
18/100 Sharp or U	50 Poly or 40 Cotton Long Fiber	Upholstery, Canvas	Heavy to Medium
16/100 Leather	Polyester	Heavy Leather	Very Heavy
16/100 Sharp or U	Buttonhole Twist	General Fabrics	Light to Mid (Decorative)
16/100 Sharp or U	40 Cotton, 50 Poly	Denim, Drapery, Heavy Pile, Vinyl	Med-Heavy
14/90 Leather	40 Cotton, 50 Poly	Suede	Heavy
14/90 Ballpoint	50 Cotton, 50 Poly	Knits, Bonded, Double Knit, Stretch	Medium Stretch
14/90 Denim	50 Poly or Cotton	Denim or Jeans	Medium
14/90 Sharp or U	50 Poly or Cotton	Pile, Cottons, Linen, Velvet, Satin	Medium
12/85 Quilting	50 Cotton	Cotton Three Ply	Quilting Layers
12/85 Embroidery	40 Poly	Stabilized Fabric	Embroidery
12/85 Sharp or U	50 Poly or Cotton	Cottons, Pile, Linen, Velvet, Satin	Medium to Med-Light
11/80 Sharp or U	50 Poly or Cotton	Batiste, Crepe, Chiffon, Velvet, Jersey	Light
9/70 Sharp or U	50 Poly or Cotton	Chiffon, Lace, Organza, Tulle	Delicate
8/60 Sharp or U	60 Cotton	Chiffon, Lace, Organza, Tulle, Voile	Very Delicate
Sharp Point 8-18	Cotton or Poly	Woven Fabrics	Any Weight
Universal Point 8-18	Cotton or Poly	Woven Fabrics	Any Weight
Ball Point 8-16	Cotton or Poly	Knit Fabrics	Any Weight
Wedge Point 11-18	Cotton or Poly	Leather and Vinyl	Thick or Heavy

System	Needle Sizes	NEEDLE COMPOSITIONS
European	60-120	Stainless Steel
American	SAE 8-19	Titanium
130/795H	Home Machine Needle System	

Notes:

Sharp Needles are also called Microtec

Sharp

Ball Point means the same as Stretch Point



CHAPTER TEN

How Do You Use Patterns & Templates

PATTERNS AND TEMPLATES

Patterns are project design details, instructions, and piece by piece step by step drawings of the sewing project usually produced on thin tissue paper. The paper pattern with all its parts is folded neatly and placed in a pattern envelope for sale.

Some of the more common pattern companies include: McCalls, Simplicity, Kwik Sew, and Vogue. Many fabric stores stock a wide variety of these patterns for sale. Patterns are available for almost every imaginable project you can think up. Pants, shirts, blouses, dresses, children's clothing, suits, jackets, and hundreds of other garment projects in multiple sizes, fashions, and designs are yours for just a few dollars. Draperies, curtains, window toppers, slip covers, pillows, wall hangings, and hundreds of other home décor projects are covered.

Like patterns, templates provide easy to use project designs, project drawing tools, and instructions to make projects easy to do. Unlike patterns, however, templates are usually made on durable permanent materials for frequent and repeated use. Templates are usually more expensive than patterns, but may be used again and again

making them highly economical for repeated project productions.

Many designers especially those focusing on quilting activities, have developed acrylic rulers with special shapes and sizes. These rulers function much like templates, because they can be used over and over again to produce similar design features. Technically, however, they are considered rulers instead of templates. Templates are usually designed for a specific project, and rulers may be applied to many different projects with similar design features.

Patterns, templates, and rulers are vital tools for the sewer, because they take most of the design work out of the project. When you want to do a project, and you have a professionally designed pattern (template, or ruler with instructions); the job is greatly simplified.

What happens when you do not have a pattern? What if you do not have a template?

Before pattern companies began publishing patterns and templates, the seamstress or sewer would create their own pattern. The process of making your own patterns for your project (especially as it applies to garment construction) is called draping.

The process is fairly simple. You use cheap fabric like muslin or you use paper like butcher's paper. You find a model or a person for whom the garment is going to be custom designed. You drape the fabric (or paper – not usually as accurate), over the portion of the model's body marking it carefully with a marker. Add appropriate seam allowances, ease, and other elements, and cut out the draped "pattern piece". The designer would take many measurements to insure accuracy throughout the project.

The pattern maker or designer makes a bodice, front, back, shoulder, whatever garment element you anticipate making. Soon the draped pattern is ready. Construction of the garment or project proceeds the same way with the draped pattern as you would a published pattern from any of the pattern design houses. Usually, when seamstresses or tailors use this approach, they make a trial garment basting it together before constructing the final garment.

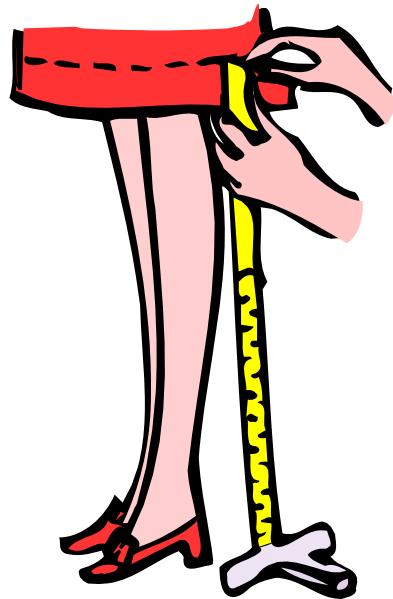
LAY OUT AND CUT OUT

Your pattern envelope provides crucial information on every detail of your project. Treat it like a chapter of the "Sewing" Bible.

Your pattern contains multiple views, options, and details about your project. It includes information on body sizes, amounts of fabric needed, and finished measurements. Take special note of the fabric widths, because fabric comes in a variety of different widths. A yard of 35" wide fabric obviously has less fabric than 45" or 60" fabric. Instructions are given concerning how to lay out the pattern and cut out the fabric.

Since most patterns include optional views, you must choose your view. Once chosen, the instructions will list what pattern pieces are needed to create that garment or project views. They are numbered or lettered to make easy identification. Make certain you use the right layout pieces for your project, your pattern size, and your fabric.

Patterns are intended to be adjusted. They are designed based on average body length and distance around the body at various points. It is common for your body measurements to be a bit different from the pattern. Therefore, the first step before final layout is to adjust the pattern so it fits your body. There are twelve measurements needed for women and nine for men. You may want more depending on your personal needs.



Taking a woman's measurements include the following:

BUST



Chest (High Bust)



WAIST



HIPS



CENTER BACK



ARM GIRTH



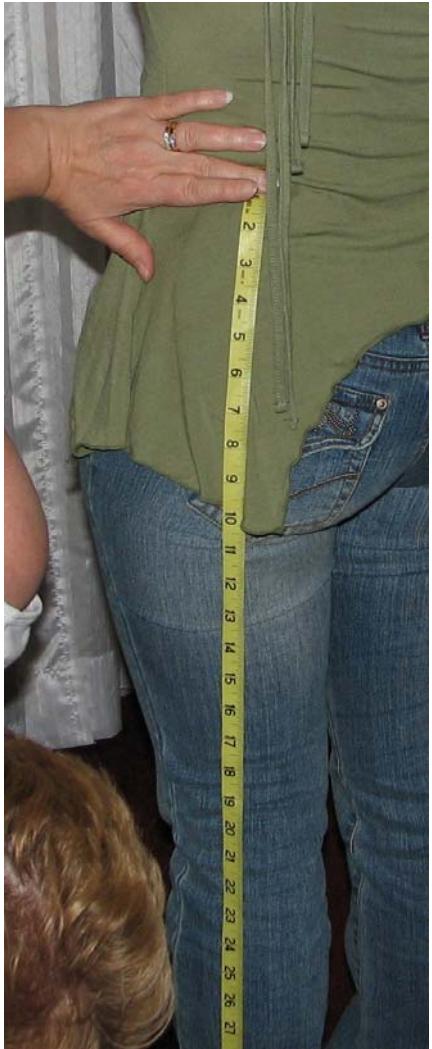
SHOULDER TO ELBOW



ARM MEASUREMENT



WAIST TO HEM



INSEAM



You will also need to set measures for sleeve length, hem length, and any special custom measurements needed. Use the cloth measuring tape to take measurements at the fullest parts especially around busts, hips, shoulders, and abdomen.

A man's measurements should include: Neck, Chest, Waist, Sleeve Length, Height, Hip (Seat), Length, Waist to Seat, Pants Length, Inseam Length. Be sure to allow one half inch ease around the neck for collar measurement. Measure sleeve length with arm bent. Measure height with shoes off. Measure inseam along the inseam (inside seam) of slacks that are already comfortable.



Take your measurements and compare them with the pattern measures. Notice the differences so you can adjust accordingly. Frequently, the measurements given in the patterns are unreliable. When you make your measurements be sure to "Measure twice and cut once." Also, be sure to include appropriate space for ease in your measurements.

Before cutting anything, measure twice. Double check every measurement and every detail. Calculate appropriate ease or the give necessary to make a comfortable fit.

Ease is a term that essentially means extra clearance or room. It has two basic applications in sewing. From a design perspective, ease is the fullness of a garment that makes the garment look good while you wear the finished garment.

First, it describes the squeezing or allowance needed to fit fabrics of different sizes, shapes, or contours together for proper fit. A longer piece of fabric is said to be eased to fit a shorter piece. The cap of a sleeve is eased into the armhole to form a proper fitting sleeve. Ease is simply fitting two fabrics that are different in some way together so that the fit properly. Commonly, a hem may be sewn with a slightly shorter fabric held tightly (maybe even stretched) a bit on the bottom and a larger piece eased more loosely on top. When elastic is attached at a waistline, it is stretched and sewn onto the less stretchy fabric.

Second, the term ease refers to the difference between the actual measurements of the body and the measurement of a garment. Ease, in this case, refers to the allowance - tightness or

looseness - of the garment. The following ease allowances need to be applied in clothing construction. High bust or Chest ease should be between one and two inches. Bust ease should be two to four inches. Front waist length ease should be one quarter to one half inch. Waistline ease should be one half to one inch. Hip ease should be between two and six inches. Upper arm girth ease should measure two to three inches. Add hem allowances to skirt length and dress length measurements. Every garment you make will require considerations of ease.

Carefully copy or cut out these pattern pieces. If you copy the pattern pieces, trim them to the appropriate pattern shapes and composition. Pay special attention to the pattern markings indicating notches, grain lines, and other pattern elements. Make the needed adjustments on the pattern before cutting out the pieces. Do an initial fit of the pattern by placing each piece especially the sloper along the portion of the body where it belongs. Keep in mind the extra yardages for seam allowances, does the pattern piece appear to fit comfortable? If so, continue. If not, adjust the pattern.

When trimming and cutting, always keep in mind it is much easier to cut a little bit more than it is to put a pattern piece or a piece of fabric back.

Take these pieces that you have cut out. Lay your fabric out as prescribed in the pattern directions. Pay close attention to instructions concerning single layers, double layers of fabric, and grain lines.

Traditional pattern adjustment procedures (as developed by Bishop and Arch) include Pinning an even tuck, slash and add tissue paper, and slide the pattern. A pattern may be shortened by simply folding an even tuck of the pattern paper, creasing it neatly, and pinning it in place. A pattern may be lengthened by slashing straight across the pattern and inserting a tissue paper filler. Be sure to keep all the patterns lines, seam lines, and pattern markings even and in straight lines when using the slash and all tissue paper technique. Slide the pattern involves laying the pattern piece on the fabric and marking pattern information with chalk or removable marking pen (or cut out the section), and then sliding the pattern to the other side of the actual measurement and marking for cut out. Pivoting the

pattern is similar to sliding the pattern, except a portion of the pattern remains fixed while the pattern is aligned for adjusted length or width. These and many other techniques may be used to adjust the pattern as needed.

Fitting the pattern and final garment fitting, however, are a science unto themselves, and beyond the scope of this book. Generally, take precise body measurements, adjust the pattern, and be sure to compensate with appropriate ease adjustments and seam allowances.



We will discuss two ways to lay out your pattern and cut the fabric pieces. First we will discuss the Pinning Approach, and then we will discuss a quick and easy way using Pattern Weight Approach.

The Pinning Approach: Lay your fabric pieces on top of the fabric, and pin them in place using large glass head pins. Lay out all the prescribed pattern pieces on the fabric. Pay close attention to the instructions on the pattern. Especially, notice how many pieces are needed. Smooth out the fabric with your hands paying close attention to how the pattern



pieces lie along the lengthwise grain. Pay very close attention to the grainline, folds, and other details as prescribed by the pattern. Portions of your project may involve folding your fabric twice or more times to cut more than one piece at a time. It may also involve layering the fabric with lining to cut out lining and face fabrics at the same time. Generally, pin from the inside of the pattern toward the cut line, but do not extend the pin past the cut line. A pin in each corner of the pattern piece is usually sufficient. You may need to gently fold or roll the fabric with the pattern pinned on it to fit the entire pattern on to the pinning or cutting table. You may also all the pieces to gently drape over the end of the table, but be careful to avoid stepping or otherwise messing up the pieces already pinned. Once all the pattern pieces are pinned to the fabric you are ready to cut them out. You may use a quality pair of fabric scissors or a rotary cutter to cut out the pattern.



Be sure to avoid pins in both cases.

Pattern Weight Approach.

A quicker and in some ways easier way to cut out the pattern is to use pattern weights. Using your rotary cutter lay the pattern on the rotary cutting mat and cut out the pattern pieces. Follow the instruction printed on the pattern in every detail. Next, Lay out your fabric on the cutting table over the top of your cutting mat, and place one, two, or three pattern pieces on the fabric lining everything up correctly with



grainline, folds, layers of fabric, and other details defined by the pattern. Smooth the pattern piece with your hand and place a pattern weight on top of the pattern piece. Take your rotary cutter and begin cutting the fabric following the pattern carefully. When using a rotary cutter, always be careful. It is sharp. Cut away from you, not toward you. With a little practice, you will be able to cut out your fabric pieces quickly and easily. Experience with your various cutting tools will give you confidence when cutting out the fabric pieces.



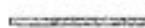
PATTERN MARKINGS



GRAINLINE: Place on straight grain of fabric, an even distance from selvage or fold.



FOLD LINE: Place on fold of fabric.



CUTTING LINE: For cutting.



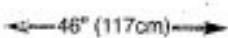
SEAM LINE: For stitching.



SEAM ALLOWANCE: Distance between cutting and seam lines, usually $5/8"$ (1.5cm). On multi-sized patterns seam allowance is included, but not printed on tissue.



NOTCHES AND SYMBOLS: For matching pattern pieces.



FINISHED GARMENT MEASUREMENT SYMBOL: The finished garment measurements at bust and/or hip are printed on your Front pattern pieces. The measurement includes **Body Measurement + Wearing Ease + Design Ease**. The measurement excludes pleats, tucks, darts and seam allowances. Measurements are also printed on the back of the pattern envelope when space is available.

The instructions include a key to guide you as you lay out the pattern. Give special notice to the markings on the patterns for fitting, adjusting, shaping, and constructing the garment.

Notice the grainline indicator and line it up with the lengthwise grain of the fabric. If your fabric has special issues such as stripes, plaids, nap, directional print, or other special consideration, be very careful to consider these concerns during the layout stage and prior to cutting.

The Fold Line is very important as we noted above. If you need to adjust the pattern length, the pattern shows you how to make the adjustment.

When cutting out the pattern pieces, take special precaution to leave the whole cutting line in tact. Do not cut the cut line.

The broken line indicating the seam or stitching line shows you where you are going to sew. In garment construction, this seam line will usually be five-eighths of an inch inside the cut line for a five eighths seam allowance. In quilt designs, you may notice the more common one quarter inch seam allowance. Pay very close attention to the seam line and set your sewing machine guide for the correct seam allowance.

The Notches, Symbols, or Points tell you where various pattern pieces must line up to match the parts together. These guides are essential and should never be overlooked. I

Marking the fabric with the essential pattern detail can be done in several ways: Cutting Clips in the fabric, using marker pens on wrong side of fabric, and basting on top of fabric.

To mark the notches, the recommended procedure is to make a small snip at the appropriate place indicated by the pattern in the seam allowance (not deep enough to cross the seaming line).



You may use a temporary marker to mark on the wrong side of the fabric. It is important to mark the notches, circles, and dots in order to insure proper alignment of the pattern pieces. Mark the darts, tuck, and other detail in similar fashion.



The Finished Garment Symbol indicates what the total measurement will be without any adjustments. The measurement includes the body measurement, and ease, but does not include pattern adjustments, seam allowances, darts, pleats, or tucks.

Once the pattern is laid out, transfer the information to the wrong side of the fabric by using appropriate marking tools.

Another technique for transferring markings to the right side of the fabric is to use a long basting stitches and sew along the marks (Tailor Tacks).

When all pattern pieces are layout and each fabric piece is ready, then you may begin the cutting process. While cutting, avoid moving the fabric. As much as possible physically move around the cutting table yourself. Moving the fabric can cause distortions in the finished pattern due to wrinkles and misalignment. If you must move the fabric during the cut out phase, be sure to lay it flat, smooth out any wrinkles, and double check that it is ready to cut before proceeding.

Remember, “Measure Twice and Cut Once.”

Various detailed tips, instructions, and guidelines are also printed on the pattern instruction sheets. It is essential to follow step by step each pattern instruction, at least until you are proficient at pattern layout and cutout. It will save time and grief to complete each step before moving on to the next.



CHAPTER ELEVEN SEWING & PRESSING

In this chapter, we will explore some of the most common sewing techniques used in a variety of different sewing projects. As you learn more, you will discover many other sewing techniques, but these will be used over and over again.

Here we will explore How to Baste; Sew A Satin Stitch, How to Sew A Blanket Stitch, How to Sew a Blind Stitch hem, How to Sew A Mitered Corner, How to Stitch In The Ditch, How to do Free Motion sewing. And we will examine the essential techniques for Ironing And Pressing.

HOW TO YOU BASTE

HOW DO YOU SEW A SATIN STITCH?

All stitches begin as a straight stitch. The straight stitch may be adjusted for stitch length to create fine, medium, and long straight stitches. The longest straight stitch is called a basting stitch.

When you add width to the straight stitch, you create the zig zag stitch. Long zig zag stitches form zig zag basting stitches. When the zig zag stitch is shortened very short so that the threads lie flat against each other, it forms a satin stitch.

To sew a satin stitch, it is essential to use a satin stitch presser foot. The standard zig zag stitch presser foot has a ridge that catch on threads if the threads begin to bunch up. The satin stitch presser foot has a groove on the bottom of the foot to permit the stitches to neatly flow under the presser foot without becoming bunched up or snagged by the presser foot.



Adjust the satin stitch by adjusting the stitch length. Adjust the stitches to a fine satin layer of threads. If the stitch length is too tight, the fabric may not move at all or the threads may overlap leaving a lumpy looking stitch. If the stitch length is too long, you will see spaced between the threads. The goal is for the threads to line up neatly side by side forming a satin line of stitches.

Guide the fabric for all stitches in the same way. Place the fabric about one half inch under the presser foot. Place your guide hand (right hand) along the edge of the fabric in order to guide the fabric accurately. Place or smoothing hand (left hand) on the top of the fabric to the left and in front of the needle to keep the fabric lying flat and flowing smoothly. Allow the sewing machine to drive the fabric through the machine.



When sewing curves with a satin stitch, remember not to turn too sharply. A gradual run will keep the satin stitch from leaving spaced between the threads. It may be necessary to slightly shorten the stitch length if you are finding too many open spaces between threads along curves.

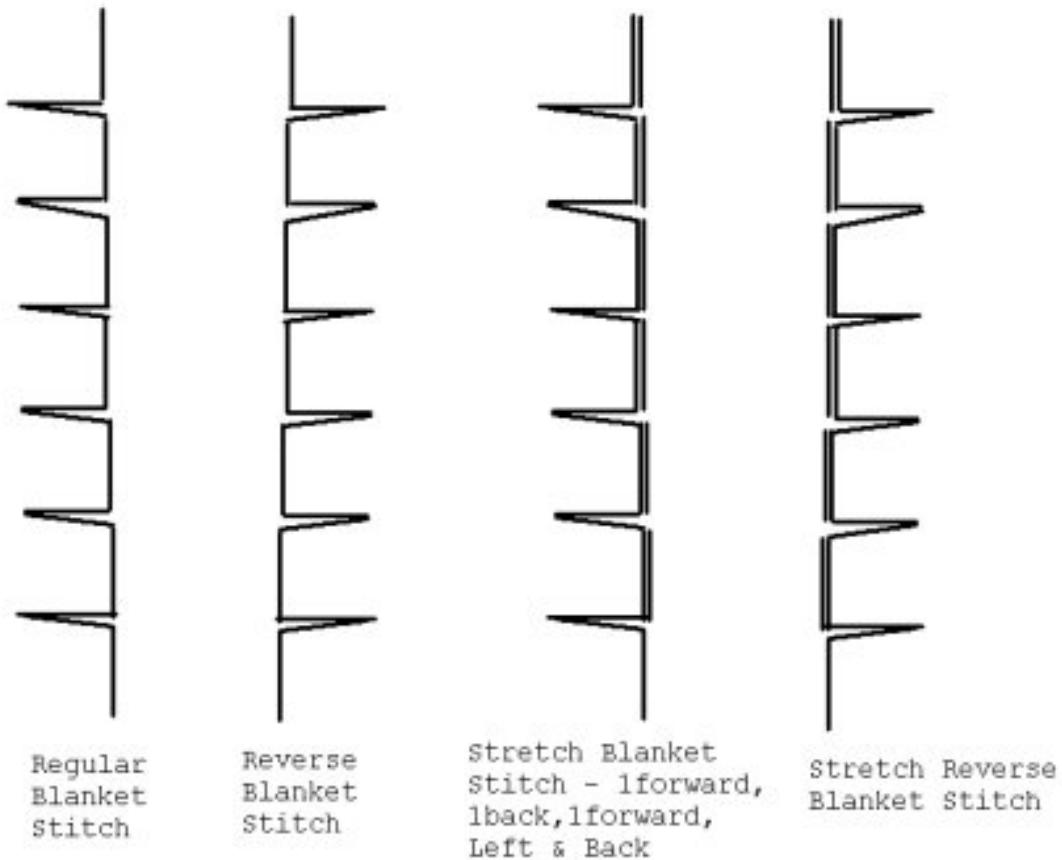
For much more detail and information on sewing machine stitches and their fine tuning, see **A Multitude Of Stitches** by Donna and David Trumble available at www.sewinganswers.com. You will find full explanations on the operation, use, and adjustments of your sewing machine.

For answers to hundreds of other sewing and quilting questions, check out www.sewinganswers.com.

HOW DO YOU DO A BLANKET STITCH?

The blanket stitch takes its name from its classic use as a stitch in finishing the edges of blankets. Like all stitches, the blanket is essentially a straight stitch that occasionally adds stitch width or that adds stitch width plus a reverse stitch. The blanket stitch may be varied by adding or

reducing stitch length, and by increasing or decreasing the stitch width.



The blanket stitch may be one of four basic types: Regular with a left jump, Reverse with a right jump, Stretch with a left jump, Stretch with a right jump. Above is an illustration of how blanket stitches are formed.

In the first example, you will notice that the stitch begins as a straight stitch and adds a left (only) zig to the stitch and zags back to the center for another straight stitch. The Reverse Blanket Stitch is exactly that. It starts with a straight stitch and zigs to the right and back. The Stretch Blanket Stitch adds increased strength and versatility to the stitch by reinforcing the straight stitch with a backward stitch and a second straight stitch prior to the zig left and back. The Reverse Stretch Blanket Stitch does the same but in a mirror image of the other.



The blanket stitch has great utility. It is often used as an appliquéd stitch to attach appliqués to garments or other items for decorative purposes. It is frequently used as an edge stitch such as edging around blankets from which it derives its name. The blanket stitch may be used as a buttonhole stitch especially when backing or stabilizer is needed. Heirloom sewing uses the blanket stitch for all manner of decorative applications including attaching delicate lace and wing needle sewing.

To sew on an appliquéd with the blanket stitch, you have two choices to make before you sew. Do you adhere the appliquéd to the garment or article first, or do you simply begin sewing with your blanket stitch.

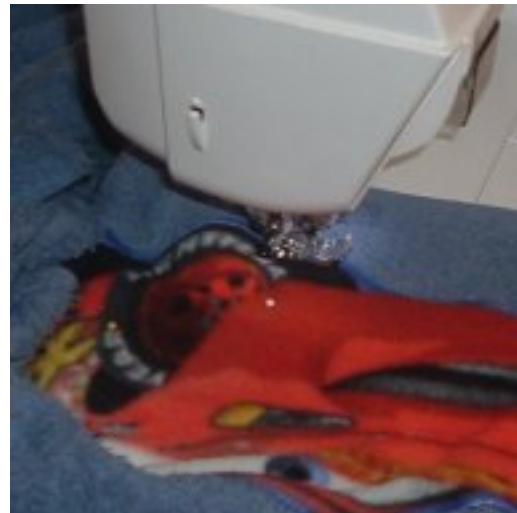
If you choose to stabilize the appliquéd or otherwise attach the appliquéd prior to sewing, you will find a host of products useful. Heat n' Bond Light is an iron on adhesive that you would press on to the back of the appliquéd and set it in place. You might also consider using Spray 505 an adhesive you can spray on the back of your appliquéd, and set it in place. Other products are also available for similar application.

You may also use pins or basting stitch to initially attach the appliquéd prior to sewing with the blanket stitch to hold the appliquéd in place.

- Once you are ready to sew with the blanket stitch, choose the correct stitch. Align the appliqué so that its edge is just left of the needle, but not under it.



- Begin sewing slowly making sure to sew the straight portion of the stitch just outside the appliqué on the base fabric or garment. Watch the blanket stitch zig over to stitch on the appliqué.



- Remember, you can adjust how far the stitch goes into the appliqué by adjusting the stitch width control up or down. Also you can adjust how close together the zig portions of stitches are by increasing or decreasing the stitch length control.



- Sewing is not a precise or perfect science. Use the blanket stitch to make the appliqu  look the way you like it. The Finished product is fantastic.



- The finished project is a beautiful finished appliqu  that will inspire its user for a long time. This project is an appliqu  for a towel. Ethan, our grandson, called his Dad at work today and asked, "Please digimatize Sparky for me." Well, Grandma heard about it and immediately set out to fill the need with this precious little appliqu .



The Blanket Stitch makes a great edge stitch. Before sewing machines came along, the blanket stitch was hand sewn on the edge of blankets to make a functional and attractive edge finish. Today the blanket stitch is a popular choice for this application.

To sew an edge stitch is very similar to sewing on an appliqu . Fold the raw edge of the fabric over about an eighth of an inch and finger press it in place. Position the folded edge of the blanket, bib, garment, or other project just left of the needle, but not under it. Begin sewing and adjust the stitch for its most appealing setting.



Once the edge stitching is completed, a second step is required. Turn the fabric over and notice that some of the folded over edge is left a bit sloppy. Using your embroidery scissors or pelican shears, trim off the excess fabric from the blanket stitch leaving a beautifully finished edge. The illustration below illustrates the basic technique, but you will find it easy to trim the excess.



Another popular use of the Blanket Stitch is in the arena of Heirloom Sewing. Here it is used for a variety of decorative applications including attaching lace, sewing with winged needle, and fagoting.

To attach lace using the Blanket Stitch, align the fabric with the left side of the needle. Position the lace in line with the needle. Using a blanket stitch, carefully guide the straight stitching along the edge of the fabric while feeding the lace into the seam. The blanket stitch will zig over to the left picking up the fabric and attaching it to the lace. This technique is ideal for adding lace to infant garments, bibs, tablemats, and hundreds of other similar projects.



Align the fabric with the left side of needle.

Align the lace with the right side of the needle.

Straight stitch along lace.

Zig over to pick up the fabric.



Guide the fabric with your left hand.

Feed the lace along with your right hand.

The Blanket Stitch will join them perfectly.

The finished product is not only functional, it is beautiful.

Using the Blanket Stitch will make you proud of your sewing.





The Finished product is always amazing. Notice, if you use a winged needle you can add a special feature of little holes along the end of the blanket stitch as you see here.



Notice the distinct holes on the left. These are made by the winged needle in the fabric. It makes an interesting addition.



Here are some additional samples of the special effects you can achieve using the blanket stitch with the winged needle for that heirloom impact.

You can sew decorative stitches, add lace in the middle of a garment, or add lace to the edge easy as it can be.

Another neat technique is fagoting, which is simply joining two fabrics into one without overlapping them. Using the Blanket Stitch is easy to create a gorgeous heirloom effect using the fagoting technique.



To fagot two fabrics, fold over their raw edges and press or finger press them down. Line them up with the presserfoot of the sewing machine so that the left fabric is slightly under the needle ready for the straight stitch portion of the stitch.



The Blanket Stitch sews straight on one fabric while zigging over to attach the other fabric. The two fabrics are thus joined together using the Fagoting Technique.



The finished product is simple, where there were two, there are now one. The two separate fabric pieces are now connected.

One additional application of the Blanket Stitch is its use on button holes. You may see these on thick fleece or winter coats. They are especially useful for larger buttons requiring larger buttonholes.

Begin by marking the start and stop of the button hole



by measuring the button (lay the button down) and marking the ends with pins. It is always a good idea to stabilize buttonholes by placing special stabilizer fabric under the location where you intend to make the buttonhole.

Then proceed to sew completely around the buttonhole carefully pivoting around the ends.

The zig of the stitch should reach into the buttonhole, while the straight stitch portion maintains a solid perimeter.



The finished button hole is strong and dependable. It is also a beautiful buttonhole thanks to the Blanket Stitch.

HOW DO YOU

SEW A BLIND HEM STITCH?

There are many different kinds of hems, but among the most popular is the blind hem. Fundamentally, the blind hem is achieved by folding fabric and sewing the blind hem stitch. Once it is sewn, garment has a nice folded over edge with almost no evidence of a seam line on the face of the fabric. (Hence, Invisible.)

To sew the blind hem, it is essential that you have a blind hem presser foot and a blind hem stitch on your sewing machine. The blind hem presser foot has a special guide on it to help keep your hem straight and reduce sloppy hemming. The blind hem stitch is essentially a straight stitch that zigs periodically to pick up the fabric.

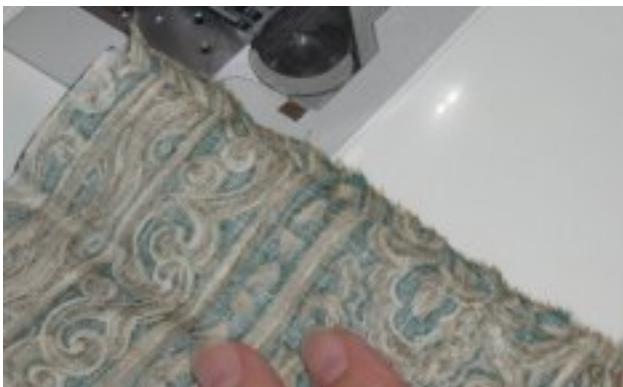


Notice the guide running down the center of the presser foot. This is essential to help you keep the blind hem stitch under control and sewing precisely down the edge of the hem.

You may begin by overcastting the edge of the fabric to prevent fray. To do this, simply zig zag along the edge of the fabric keeping the stitch right along the edge of the fabric. You may also leave the edge of the garment as is if desired, or you may fold over an additional one quarter inch

fold encasing the edge. As usual, there are often multiple options depending on how much of a perfectionist you are.

Fold your fabric properly. This is simple if you have done it a hundred times, but amazingly it is hard to remember if you don't do it periodically. Fold the fabric two inches wrong sides together and press. (TIP: Whenever you fold the fabric it is a good idea to press the fold in place.)



With the fabric folded, sew a basting line all the way around the fold maintaining a one quarter inch seam allowance from the raw edge. This will hold the hem in place while you complete the sewing and makes a neater hemline.

Another technique that achieves the same result is to pin the fold in place being sure to remove the pins as you sew.



Fold the fabric back good sides together along basting line (or pinned line).



You will see a quarter inch zig zagged edge exposed.

Using the correct presser foot, sew along the edge of the fabric using the blind hem stitch or blind hem stretch stitch if sewing on stretchy material.



Note there are a couple of different styles of blind hem feet, but the essential feature you need is the little finger that splits down the center of the presser foot which serves as a guide for sewing. Place your presser foot so that this finger or guide lines up just outside the fold of the fabric. As you sew the blind hem stitch will stitch on the edge of the fabric with a straight stitch and periodically jump across this guide to sew one stitch on the



edge of the fold.

(TIP: You want as little bite into the fold as possible while still stitching in the fold.)

If the bite of the jump stitch is too deep or too far into the fold of the fabric, it will be seen on the face of the fabric when you are finished. If the jump stitch does not penetrate the fold at all, it will not be attached and will hang loose. You can adjust the bite of the stitch by changing the stitch width adjustment on your sewing machine, or some blind hem feet will have a small screw that will allow you to adjust it with a quick turn of the knob.

Once you have finished your seam, turn the fabric over and remove the basting stitch. Using your fingers or a seam ripper, it is easy to quickly remove the basting stitch. You will notice that if everything worked like it is suppose to, you can barely see where the blind hem stitches are on the face of the fabric.



The blind hem has become such an important part of sewing that a whole line of specialty machines have been created for the sole purpose of sewing blind hem stitches. These machines do a fabulous job for professional seamstresses, custom clothiers, and commercial applications, but you can achieve almost the same quality using your home sewing machine using the right presser foot and carefully sewing with the blind hem stitch.



To learn more about hemming, sewing techniques, and your many hemming options, see **A Multitude of Stitches** and **Dynamic Sewing Techniques** by Donna and David Trumble available at www.sewinganswers.com.

For answers to hundreds of other sewing and quilting questions, check out www.sewinganswers.com.

HOW DO YOU SEW A MITERED CORNER?

What is a mitered corner?

A mitered corner is a corner that is cut and pieced together to form an angle. Usually, we think of mitered corners in terms of right angles or ninety degree corners made from two forty five degree corners or a sixty and thirty degree corner joined to form a right angle. Actually, a mitered corner may be a variety of different angles. If we form a hexagon with our fabric, the angles are each cut and pieced to form sixty degree angles. If all the angles are equal, it is generally easy to calculate the angles by dividing the number of angles into the full circle of three hundred sixty degrees or some proportionate part such as the ninety degree or one hundred twenty degree angles. Hence, the

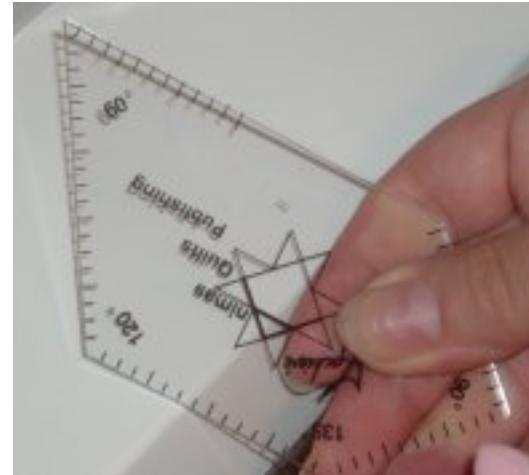
hexagon with six distinct angles (360 divided by 6 equals 60 degrees).

Not all right angled corners are mitered. A corner where fabric pieces butt up against each other to form a right angle without having been cut and pieced to form the angle is NOT a mitered corner. When a corner is made by simply folding over the fabric to form an angle, it is Not a mitered corner. You may find non mitered corners everywhere: upholstery, dressmaking, crafting, and quilting.

How do you sew a mitered binding?

A binding is a piece of fabric used to wrap the edge of something. Commonly, after a quilt is finished, a binding will be applied to its raw edges to give it a finished look.

To make a mitered binding, it is handy to use a Binding Miter Tool® to measure, cut, and shape the corner. The tool can be used to form perfect ninety degree for right angled squares and rectangles, 120 degree hexagons, and 135 degree octagon and tablerunner angles. You can find this tool at your local sew and quit store or online at www.sewinganswer.com.



Step One: Measure the length and width of the project. For accuracy measure down the center (top to bottom and side to side) instead along the edges. While the edges may stretch, the center of the quilt will retain the overall measurement more accurately.

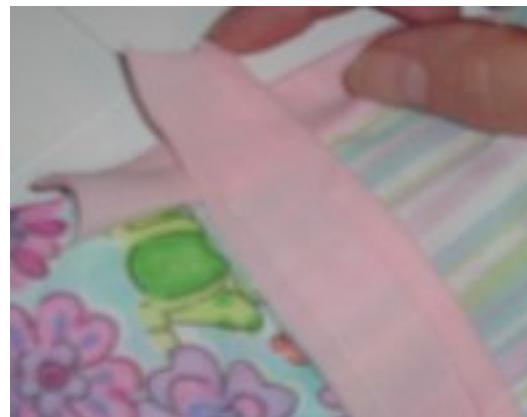
Step Two: Cut the binding strips. Sometimes the binding is cut on the straight of the fabric, and sometimes it is cut on the bias of the fabric. For the crisp corners, cut the strips from the lengthwise grain, because it stretches the least. When added stretch is needed, bias binding may be used. Bias binding is made by cutting the fabric on the diagonal in strips, and it may be purchased as a bias binding tape already cut. Cut the strips $2\frac{1}{2}$ " to 3" wide depending on the thickness of the item being bound and how much seam allowance you desire.

Step Three: Lay the binding strips end to end and sew them together to form one long ribbon of fabric long enough to cover each side of the quilt or item being bound plus two inches for play.

Step Four: Since the purpose of the binding is to envelope the raw edge of the quilt or project, the binding strips will be folded down the middle wrong sides together. Press the strips to form a neat fold half the original width.

Step Five: Lay the binding strip face to face with the fabric edge of the quilt. Make sure the raw edges of the project are even with the binding strip, and sew using a quarter inch seam allowance. Start the seam one quarter inch in from the edge of the project on both beginning and end. Leave about an inch of extra binding on each end of both beginning and end as well.

Step Six: As you work from one side to the next, just leave the trailing binding overlapped one on top of the other. Mark end of the seam with and across the folded edge of the binding.



Step Seven: Place the Binding Miter Tool® so that the point of the tool is centered on the binding with the right leg of the ruler following the line of the fabric. To determine the correct angle to follow using the Binding Miter Tool®, place the tool on the corner of the project and move it around until the angle matches the corner of your project.



Step Eight: Mark the placement of the tool by drawing around the tip creating a stitching line.



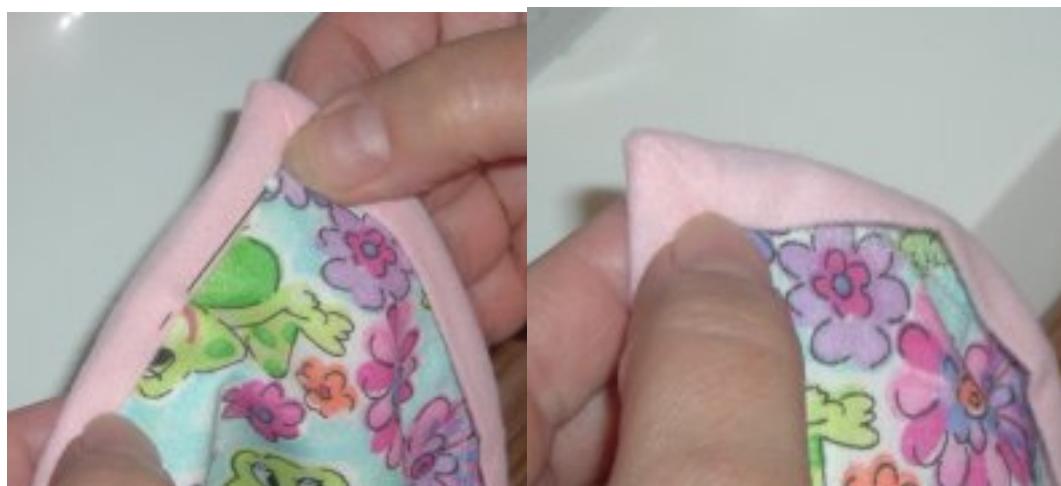
Step Nine: Stitch along the lines you just marked.



Step Ten: Trim off the excess binding.



Step Eleven: Use the point of the tool and turn the binding inside out and shape the corner.



Step Twelve: Top stitch to finish the binding process all the way around the project. If you prefer, you may hand sew the binding using a whip stitch.



The finished result is a beautifully bound quilt, blanket, or project with neat mitered corners.

How to you sew a mitered border?

A border is a fabric designed to frame a quilt block or around the outside of a quilt. It is usually made of strips of fabric sewn to the block or quilt and to each other. The strips may simply meet with two fabrics butting against each other one longer than the other, but frequently, a mitered border is desirable.

Below is a family heritage picture quilt where the a narrow border and a wider border are both mitered to form a frame around the body of the quilt. It is finished with a mitered binding.



To illustrate the techniques needed to sew a mitered border, we will start with a finished block from an Attic Window Quilt Design.

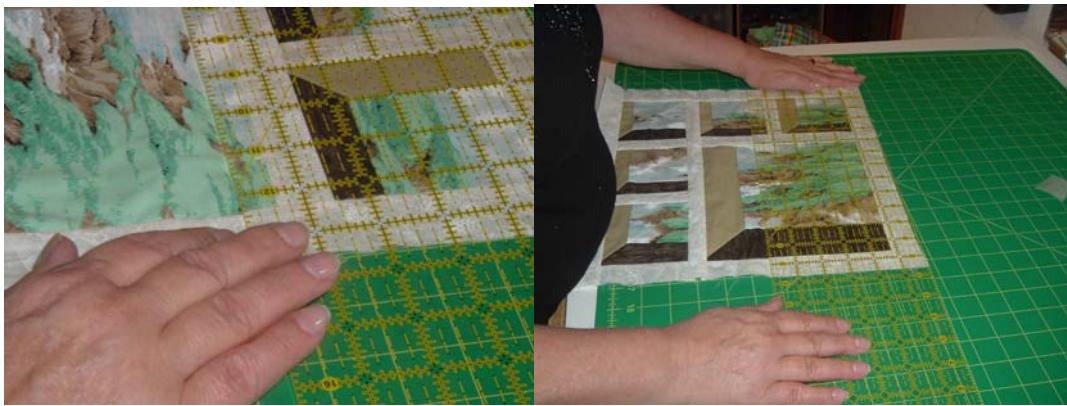


The inner border has already been applied in using a method in which the side borders and crossing borders simply form butt end joint with quarter inch seam allowances.

To sew a mitered corner in a border, simply overlap the two pieces of border where they meet, mark, cut each border piece on a forty five degree angle, and join the two pieces by sewing them together. Here a detailed step by step description of how to sew mitered corners in borders.

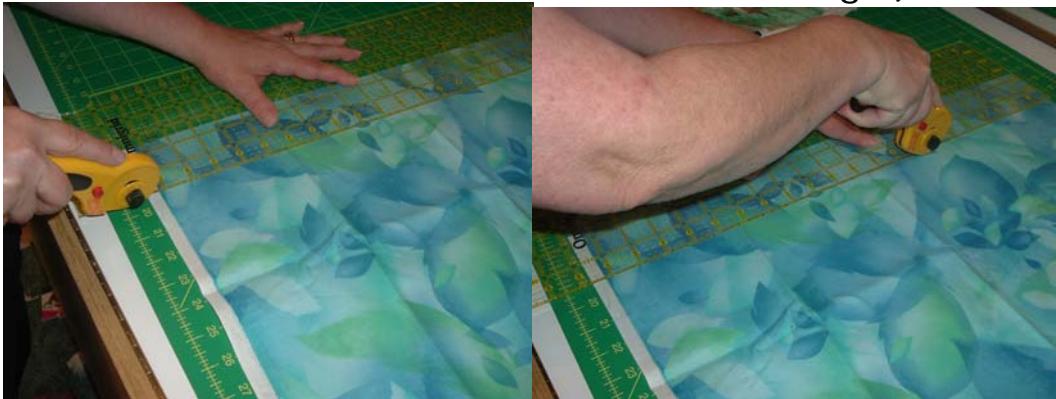
Step One: Measure accurately. Measure across the center of the height (top to bottom) and width (side to side).

The edges or sides tend to stretch giving inaccurate measurements. If needed square the block so the sides are true and straight. Be sure to measure across both horizontally and vertically.



Step Two: Select the right fabric for your borders. It may be a contrasting color, print, or texture, but it is important to choose the border you think will look good framing your quilt or block.

Step Three: Cut border strips. Borders should be cut along the lengthwise grain of the fabric . Unlike bindings, borders do not generally need the added stretch inherent in bias cuts. (Crosswise grain also has more stretch than the lengthwise grain, but less than the bias.) The size of your border will depends on how wide you want your border to be. Add about one quarter inch to the width for **each seam allowance**. (Allow one half inch overall seam allowance to join fabric with other borders, blocks, or bindings.)

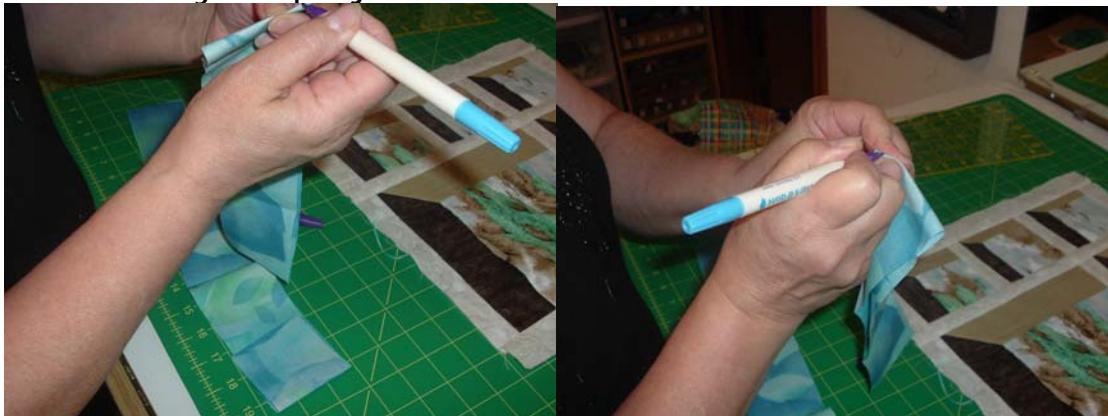


Step Four: Cut the border length of the strips to include the length of the side it will cover, plus double the width of the border (half for beginning and half for end), and add an extra four inches (half for beginning and half for end). Make sure you have enough length to conveniently make the mitered corner. If you cut it too short, you will need to cut a

brand new piece. If it is cut a little long, it is ok because you can always trim the excess.



Step Five: Layout your border along the edge of the quilt or project by starting in the middle. Measure the side. Divide the measurement by two. Mark the center of the side with a marking pen, chalk, or pin. Fold the border fabric in half lengthwise to find its middle and align the border with the side or your project.





Step Six: Lay your border fabric on the quilt right sides together with the quilt face up. Attach the centers with a pin. Finish attaching the border to the quilt top leaving the trailing ends overlapping the perpendicular borders as they meet. From the end of the quilt top mark a quarter inch seam allowance on both the quilt top and border at beginning and end of the seams.





Step Seven: Begin working on each corner one at a time. Neatly fold back one border at a forty five degree angle. You may use several different rulers to make sure this angle is accurate. Finger press it in place or use your steam iron to crease the angle fold in place. If using an iron, take care to use the press, lift, press, lift technique and avoid rubbing it over the fabric. Continue with the adjacent border fabric until the two forty five degree angles match up as a ninety degree angle.



Step Eight: Open the fold (mark it if necessary) and stitch along the folded line forming the mitered corner. Leave a quarter inch seam allowance at the beginning and ending of the seam.



Step Nine: Trim the excess trim fabric.

Step Ten: Unfold the fabric corner, and press it neatly to form a crisp edge fold over the stitching.



This border technique may be used in dozens of other sewing beyond quilting including such as table covers, table runners, scrap booking, pillows, etc.

There are many variations on this basic technique to speed the process and you may find your own special ways to joining borders in perfectly aligned mitered corners. When we were writing this instruction guide for mitered corners, we felt an obligation to provide the traditional approaches that have been taught for years, but every little

bit one of the team members would pipe up, "Why do you do it that way? Here is a quicker and easier way..."

Here is an example of a quicker easier way to do mitered border corners:

- Cut your border strips a bit longer than needed. Use longer strips.
- Lay one strip face up and lay the block face down on top of the border strip with edges together.



- Stitch a border strip using a quarter inch seam allowance along one side beginning and ending one quarter inch from the end of the block's side.(Be sure to anchor seam beginning and end.)



- Turn the block ninety degrees to do the adjacent side.

- ▣ Turn back the end of the side already sewn so it is out of the way.



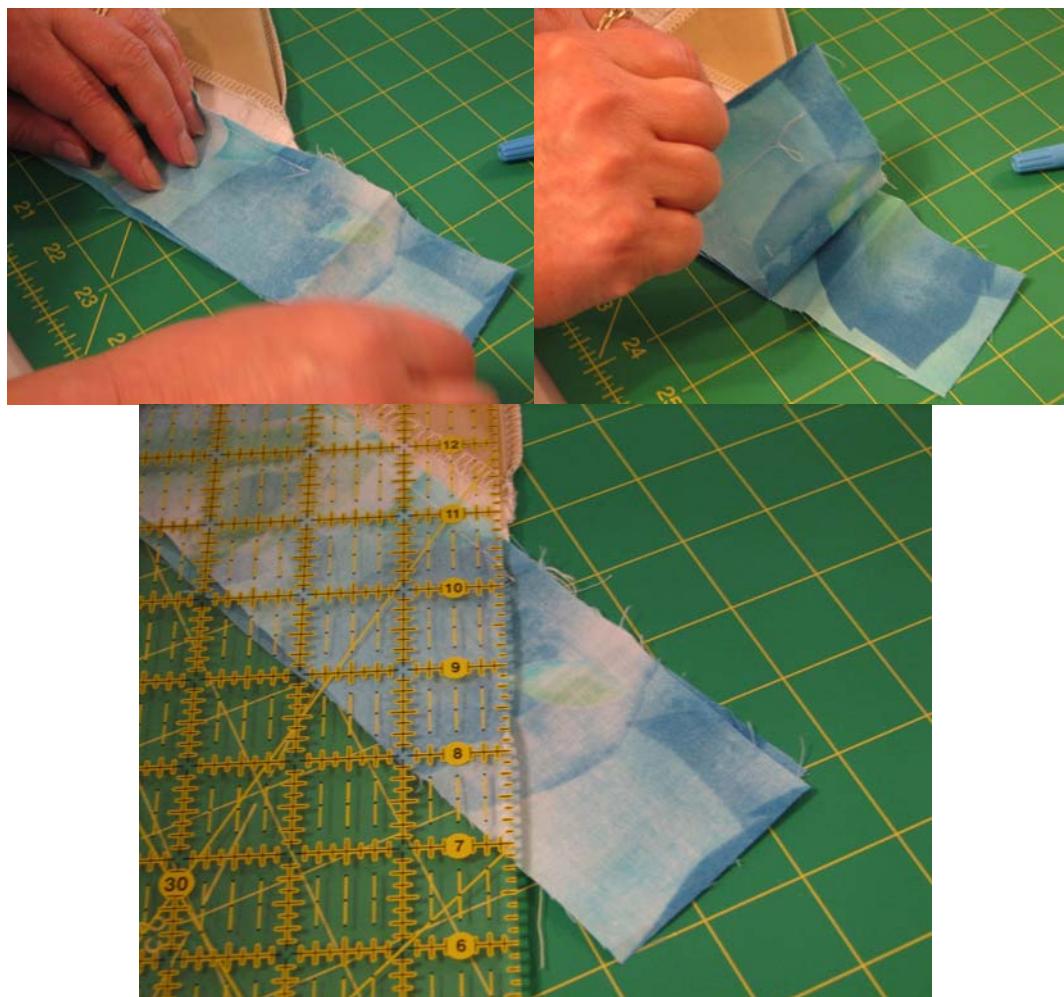
- ▣ Align a second border strip as before and sew.



- ▣ Now notice that you have two strips of fabric flopping beyond the corner of the block.
- ▣ Align these face to face following the line of the block to form a forty five degree angle.

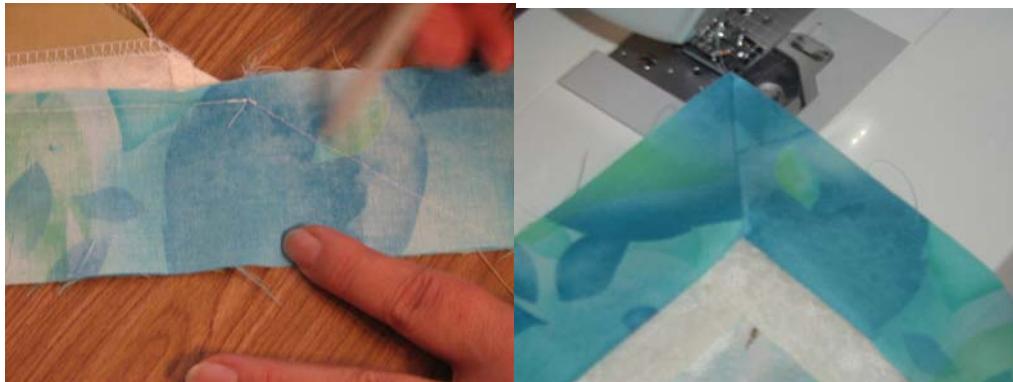


❖ Sew along the angle.





- Trim the excess fabric, and open it up to a perfectly formed mitered corner.



Making beautiful mitered corners is only one of hundreds of wonderful creative techniques that you can do. Your possibilities are endless. Think big and achieve all your dreams of creative expression. Enjoy the amazing world of sewing.

HOW TO STITCH IN THE DITCH HOW TO DO FREE MOTION SEWING

IRONING AND PRESSING



CHAPTER TWELVE

SEWING WITH SPECIAL NOTIONS

Elastic, Zippers, And Velcro

HOW DO YOU ADD AN ELASTIC WAISTBAND?

How do you add an Elastic Waistline?

For comfort and convenience an elastic waistline is ideal. There are several different ways to add elastic to the waistline of slacks or skirt. In this article, I am going to explain two ways to achieve the same results. The first is the quick and easy way that I have developed over years of sewing, and the second is the traditional "old fashioned" way you may find in dozens of other sewing books.

The Quick and Easy Way involves folding fabric, pressing, measuring the elastic, anchoring the elastic, and sewing the fabric fold closed to form a casing around the elastic.



First, lay your skirt or slacks flat on the ironing board. Press out any wrinkles or irregularities so it lies flat. Be sure you have allowed approximately four inches above the garment to use for encasing the elastic. Fold over about one forth of an inch of fabric all the way around the top of the fabric wrong sides together. Press this fold in place leaving a nice crisp edge.

Fold the fabric once again in the same direction forming a fold that is about one fourth inch wider than the width of the elastic you intend to use. Press the fold making a nice crisp edge. This double folded fabric forms a casing through which the elastic will secured forming the waistband for the skirt of slacks.





Second, take the elastic you have chosen for the waistband and stretch it around the waistline for a snug fit and add one inch more. Cut the elastic and take the waistband to the sewing machine. Lay the elastic on the free arm of the sewing machine so that the ends of the waistband overlap one inch. Using a medium straight stitch, sew down across the elastic. Press the reverse button and sew back up to where you started. Now sew a diagonal across to the opposite corner of the overlap. Press the reverse button and sew up across the elastic. Finally, sew back down the same line. Your final product which anchors the elastic firmly together looks like an "N".



Third, take the elastic and stretch it onto the outside of the skirt or pants top. Take the skirt or pants top with the folded over fabric, and line it up with the needle



on the free arm of the sewing machine. Fold the elastic under the fold of the fabric making sure to move it all the way inside the fold leaving the one eighth seam allowance with no elastic in it. Sew a seam along the bottom edge of this folded fabric with the elastic inside, but make certain none of the elastic gets caught in the seam. As you sew, stretch the elastic and keep the fabric nice and flat as you feed it into the sewing area. You may notice that on the back side of the sewing machine, the fabric bunches up. This is exactly what you want. Keep sewing all the way around, stretching elastic, keeping fabric flat as you feed, and keeping the elastic out of the seam itself.



Once you have sewn all the way around anchor the seam, and remove the garment from the sewing machine. Make sure the elastic moves freely inside its new casing, and that it

easily stretches and gathers appropriately.

Finally, anchor the elastic in the casing.

Depending on the type of elastic you have chosen you may need to sew in a ditch, down the center, or vertically across the elastic. It is important to puncture the elastic a little as possible. Holes in the elastic cut the elastic reducing its ability to stretch and bounce back and decreasing its durability.

There are many different types of elastic designed for use in waistbands.

1. One type has grooves running the length of the elastic with no elastic in the "ditch" between the elastic rows. With this type of elastic, you will need to feel for a ditch and sew along the ditch all the way around the garment.



2. Another type of elastic used for waistbands provides widely spaced squares between the elastic threads. In this case, you will need to increase your stitch length, stretch the elastic, and sew around the waistband.



3. A third type of waistband elastic has vertical grooves across the elastic at intervals throughout the length of the elastic. With this type of waistband, you will need to



sew anchoring lines on each side of the garment, and in front and back along these grooves.

Once the casing is sewn closed and the elastic is anchored, you are done. A couple of fabric folds and a quick seam, and you have added your elastic waistband. If you choose, you may add top stitching or other decorative finish, but you are essentially finished.

The Traditional Way is to make a casing and pull the elastic through with a bodkin (looks like a giant safety pin). This way involves overcastting the raw edge with a zig zag stitch, folding over and pinning the casing, seaming the casing, inserting the elastic waistband, and anchoring the waistband.

First, make sure you have enough fabric at the top of the garment to fold over to form the waistband casing. Finish the edge of the garment by zig zagging or overcastting the edge. Fold the fabric over wrong sides together the width of your waistband plus one quarter inch. Press the fold to form a nice crisp edge at the top of the garment.

Second, the side seam needs to be sewn up to the top of the casing on one side and to the bottom of the casing fold on the other. Press the side seam allowance open (good sides together), and refold the casing. Make sure to leave one side seam allowance free of stitching to keep the beginning and ending points of insertion open. Pin the casing in place to prevent creeping during sewing. Stitch the seam line along a one eighth inch seam allowance leaving space for the elastic to be inserted.

Third, measure the elastic around the waistline with a little stretch but still comfortable plus an inch or two for anchoring. Insert the elastic using a bodkin or you can use a large safety pin on a string. Feed the elastic from the beginning point until it comes out the other side. Match the

correct length and stitch the ends together across the width of the elastic.

Fourth, anchor the elastic inside the casing by stretching the elastic while sewing down the center of the casing and waistband. Use a long stitch length to reduce the number of penetrations through the elastic.

Finally, you may top stitch or edge stitch along the top of the waistband if desired to finish the waistband.

For much more detail and information on sewing techniques and using your sewing machine, see "Dynamic Sewing Techniques" by Donna and David Trumble available at www.sewinganswers.com.

ADVENT OF THE ZIPPER

What impact has the Zipper had on the world?

Imagine purchasing a pair of men's slacks without a zipper?

What about all those movie scenes, where the attractive lady asks someone to zip up that long zipper on the back of her dress?

Today, the zipper is everywhere. Upholstery, pillows, coats, jackets, pants, purses, travel bags, boots, overshoes, gloves, even books open and close with a zipper.

What would the world be like, without the zipper? For thousands of years, buttons and strings dominated the fastener world. Shirts, pants, coats, and most other articles of clothing were either tied or buttoned.



Certainly, the zipper has taken its dominate place in the world of fasteners. The zipper makes life more convenient and simpler in terms of dressing, traveling, carrying out personal items, and decorating our homes. It seems such a simple invention, but "Wow!" what an impact the zipper has made.

One of the earliest glimmers of this invention is found in a patent filed in 1851 by the inventor of the sewing machine, Elias Howe. In that patent, Howe details an "Automatic, Continuous Clothing Closure". He did not call it a zipper, but "if it looks like rain and feels like rain, it must be rain."

Elias Howe patented the first practical sewing machine in 1846. He struggled to raise marketing and developing funds. Before Howe could get his sewing machine widely accepted and selling big, he faced dozens of competitors including Isaac Singer. This heavy competition is often offered as an excuse for Howe not developing and marketing his "Automatic, Continuous Clothing Closure".

Over the next forty four years millions of buttons, belts, and strings were sold where Howe's closure device might have done a better more convenient job.

Problems are often the mother of invention, as in the case of Whitcomb Judson. His friend had a chronic back problem that made it difficult to put on his shoes. The long laces were painful to reach and tie. Judson solved the

problem by creating his "hookless fastener" which enabled his friend to "zip" up his shoes with a single easy motion.

At the 1893 World's Fair in Chicago, the well known inventor of the pneumatic street railway, Whitcomb Judson, introduced his "Clasp Locker" which he patented the same year. This device was still primitive by today's standards did not work well and received a fairly cool reception selling only a couple dozen at the fair. The "Clasp Locker" still not called a "zipper". The device consisted of a hook and eye fastening system. Initially, Judson applied the fastener to shoes. He believed the fastener would make putting on shoes easier than using shoe strings.

Colonel Lewis Walker joined Witcomb Judson to create the Universal Fastener Company to manufacture and market the "Clasp Locker" fastening system. Introduced at the Chicago World's Fair, the device did not receive overwhelming acceptance. It took great effort, design adjustments and serious improvement before the device began impacting the shoe market and eventually the rest of the world.

Universal Fastener Company hired Gideon Sundback, who married the local plan manager's daughter Elvira Aronson. Sunback was a skilled electrical engineer and designer. He eventually rose to the status of head designer. Grief, however, struck with full fury in 1911, when his wife Elvira died. Sundback buried himself in his work. He worked day and night at his design table designing the modern zipper which he produced by year's end 1913. He filed his patent in 1917, described as a "Talon, Separable Fastener".

The new zipper design included an increase in the number of teeth or fastening elements from four per inch to eleven. Teeth in two rows face each other. As the clasp or slider moved, it pulled the teeth together joining and interlocking with each other. Pull the clasp one direction and

the teeth interlock forming a single fastened seam. Pull the clasp the opposite direction and the teeth release leaving the zipper open with two sets of teeth separated from each other.

Not only did Sundback improve the fastener and patent it, he designed a machine to manufacture the new fastener system. The machine produced a special wire shaped in a "Y" with dimple and bump attached to a strip of fabric or cloth tape. By 1918, the factory produced several hundred feet of fastener tape per day.

The name "Zipper" was still unheard. There were many different names and descriptive phrases used to identify this device: "Automatic, Continuous Clothing Closure", "Clasp Locker", "Hookless Fastener", "Separable Fastener".

B.F. Goodrich Company designed a new line of rubber boots using the "Separable Fastener", but as the story goes, hearing the sound of the fastener, the name "Zipper" was born. Soon zippered boots and pouches to hold tobacco became the primary products using the zipper.

As we look back upon history, it seems as though the zipper was slow to catch on. Those early years from 1851 through the 1920's saw such a small growth in the use of this invention. World War I saw soldiers wearing uniforms with zippers and as well as a variety of military gear. During the 1930's, children's clothing began using the zipper to make it easier for children to dress themselves. Gradually, but certainly, the popularity of the zipper grew and expanded. The band wagon began rolling with Lord Louis Mountbatten dressed British royal youth to wear pants with zippers instead of buttons. Men's dress slacks appeared with zippers hidden behind a folded or lapped fabric. The more zippers were used, the more uses for them seemed to appear.



In 1928, the Hookless Fastener Company launch by Gideon Sundback, took on the name Talon, Inc. The Talon zipper is among the most common and popular brands of zippers from the past.

Previously, all the teeth of zippers were made of metallic wire which rusted when washed, but something amazing was about to develop. Researchers at DuPont Laboratories (1930) led by Wallace Hume Carothers and Julian Hill discovered nylon. Fishing Line, medical threads, brushes, stockings, and dozens of other products emerged. At the 1939 New York Worlds' Fair, nylon stockings were introduced taking the world by storm. Nylon parachutes and tents were made for World War II soldiers. After the war, American women rushed the market place for nylon stockings and the newest craze nylon panty hose produced in 1959 by Glen Raven Mills in North Carolina. Today most clothing zippers have nylon teeth instead of the original metal teeth.



For many years, zippers were only up or down with the clasp opening or closing the zipper. The zipper was secured at the bottom and had stops at the top to prevent the clasp from slipping off. Then amazingly, manufacturers discovered how to produce a zipper in which the clasp was permanently attached to only one side of the zipper and a portable connector was made to start the clasp when zipping. The result is a zipper that separates. On a jacket, for example, when you want the jacket open, the zipper separates leaving the front open. When you want to close or zip up the jacket, the starter gripper is inserted into the clasp holder and the clasp is pulled up to fasten the jacket securely.

The world's largest manufacturer of zippers is YKK Company of Japan originally formed in 1934 by Yoshida Kogyo Kabushikikaisha.

Today zippers are everywhere and we would not consider certain products without a zipper. There are even several different types of zippers.

Coil Zippers are what might be described as Classics. They are composed of two sets of coils joined by a slider. The most common Coil Zippers involve a coils in a spiral form with a cord running inside the coils. A less common type involve interlocking coils in a ladder style design.

Invisible Zippers encloses the zipper teeth under or inside the fabric tape so that when you look at the zipper it looks just like the garment except for the clasp that moves up and down.

Metallic Zippers use metal zipper teeth for firm dependable hold. These zippers use individually molded metal teeth. Metallic Zippers are popular on blue jeans.

Plastic-molded zippers (nylon) are the same as the metallic zippers except that the teeth are made of a nylon or plastic material.

Open Ended Zippers are zippers that may be separated and put back together using a "box and pin" device at the bottom of the zipper. The pin on one side slides into the box on the other aligning the teeth in the clasp or slide and securing the bottom of the zipper. When the pin slides out of the box, the zipper is left open fully separated.

Closed Ended Zippers are zippers that have a secured bottom and an open top. The clasp is attached and aligned on both sides of the zipper.

In terms of sewing the zippers, there are three basic types: Centered, Lapped, and Invisible. In all three cases,



it is vital to stabilize or interface the zipper to insure a strong stable fabric base for the zipper.

HOW DO YOU REPLACE INVISIBLE ZIPPERS?

What a wonderful invention: a zipper that does everything that a zipper is suppose to do, but that does not distract from the elegant design of the garment. The invisible zipper is not exactly invisible, but it is designed so you do not actually notice it. It is perfect for snug fitting garments, soft elegant fabrics, wherever you want just really do not want to see a zipper.

The invisible zipper is sewn into open seams before the seam is ever closed. No top stitching on the face of the garment gives their presence away. They simply hide out of sight out of mind until you need them.



If an invisible zipper breaks, and it can not be repaired the zipper must be replaced. To understand how to best replace the invisible zipper, we must first understand how the zipper is originally installed.

If you think of the zipper as simply part of the seam, you will find installing an invisible zipper to be quick and easy.

The following is a seven step process explaining in detail how to install an invisible zipper. The photos illustrate much of the technique.

- First, choose the seam where you want to install the zipper.
- Second, lay the zipper and fabric good sides together.



- Third, pin the zipper in place to prevent it from moving accidentally. (You may baste the zipper in place, use pins to hold the zipper in place, or carefully just begin sewing the zipper in place.) Then using the correct invisible zipper foot and straight stitch the zipper to the fabric. The zipper foot is designed with two special grooves in the bottom of the presser foot to allow the teeth of the zipper to pass through under the foot without snagging or otherwise being messed up.



- Fourth, carefully sew the zipper onto the fabric feeding the teeth of the zipper through the groove of the invisible zipper foot.



- Fifth, sew the opposite side of the zipper in the ***same direction*** as the first. ***This is critical.*** It must be directional sewn to insure proper hold and function of the zipper.



- Sixth, After sewing the zipper in place, sew the rest of the seam toward the zipper.



- Seventh, finish the seam as usual. (If the fabric is a fabric that tends to fray, zig zag to overcast the edge.)
- Your invisible zipper is now installed. Complete the garment as usual.

Now time has passed and that invisible zipper is broken. What do you do? How do you replace an invisible zipper?

The hard part is taking the old zipper out. When ready made clothing is manufactured with invisible zippers, they seam is often sewn with a serger whose stitches are more difficult to remove than regular sewing stitches, but it can still be done. So take a deep breath and relax. It is not as

tough as it sounds. Yes, it is more difficult because you may actually have four threads finishing holding the zipper in place. And yes, one of those stitches may be a zig zag overlocking stitch. But you can do it! The old adage applies here: "As you sew, so shall you rip."

Start by taking a sharp seam ripper and sliding it under the threads of the zig zag stitch and cutting the stitches about ever half to three quarters of an inch along the seam. Then turn the seam over to the other side and gently using the probe or finger of the seam ripper lift the broken threads out. Repeat this process for the straight stitch or basting stitches. Finally, clear away the pieces of thread and remove the zipper.



Once the old zipper is removed, check the condition of the fabric. Is it worn and torn? Or, is it still in pretty good condition? If it shows some wear, but you are determined to rescue the garment, use a piece of stabilizing tape along the back of the seam allowance and install the new zipper just as if everything were brand new.

For much more detail and information on using your sewing machine, see **My Sewing Machine, My Friend** by Donna and David Trumble available at www.sewinganswers.com/MyFriend. You will find full explanations on the operation, uses, and adjustments of your sewing machine.

To learn more about zippers, sewing techniques with zippers, and the many uses of zippers; see ***The Zipper Book*** by Donna and David Trumble available at www.sewinganswers.com.

For answers to hundreds of other sewing and quilting questions, check out www.sewinganswers.com.

The Velcro Crop Or The Advent Of Velcro

When people think about the cultures of the Roman Empire, Ancient Greece, and Egypt, many marvel at the strange ideas people had. The Romans traced their origins to a couple of kids raised by wolves? The Greeks and Romans believed all manner of strange stories about super beings interacting with ordinary people and super heroes fighting strange unimaginable creatures. Finally, the Egyptians even thought their pharaohs were gods and built weird pyramid tombs for them. Myths, strange stories, weird ideas?

Maybe we have outgrown such primitive thinking. Certainly we are more cultured and scientifically aware today. Of course, we have modern technology to help us get the facts and get them right. False information is quickly and easily exposed today. We expect the facts, the evidence, and the unabashed truth.

Or not. Amazingly, even we are vulnerable to half truths, deception, misinformation, and lies. We have become highly skeptical about the claims and promises of politicians. We often feel it is hard to believe anyone anymore. Even in the world's greatest hobby there are a few myths of which be amusing if some did not actually believe them.

One of these myths is certainly offered in humor. Amazingly, however, I have found that there are at least a few people who believed the story. One even argued with me quite enthusiastically. So, before I share a summary of this popular story with you, I must affirm that it is a myth, unfounded rumor, or simply a story.

Under the byline of Ken Umbach, an urgent crisis report is issued in 1993 concerning the Velcro crop in California.



The report begins, "California's important Velcro crop, vital to the clothing, footwear, and sporting goods industries, has been severely stressed by drought, disease, and pests."

At <http://home.inreach.com/kumbach/velcro.html>, the story appears concerning the fictitious Velcro crop.

The suggestion is made that Velcro is actually some type of engineered plant with two forms: one with hooks and the other with loops. The report describes the typical growing conditions with the two Velcro strains separated among cotton fields. Further, the crop is suffering under poor conditions including bad weather, bad soil, lack of water, and generally poor growing conditions. To make matters worse pestilence and disease have ravaged the crop.

The suggestion is made that this is some sort of high security confidential industrial secret is at stake. The account becomes even more bizarre suggesting that the field workers are required to wear Teflon (another spurious crop) jumpsuits to protect them against the rigors of the hooks and loops threatening the workers' hair, body, and health. The myth details the threats to the Velcro crop and the associated crisis in clothing, shoe, and other manufacturing.

The story proceeds to explain the historic ups and downs of crop production. The current crisis is brought on by the infestation of swarms of insects, and plant diseases. The adverse growing conditions plague crop production.

Note the photo above is not of naturally growing Velcro, but rather naturally growing cotton. This is a totally different crop of interest.

The story concludes with a forecast of renewed beneficial growing conditions, reduction of infestations, and increased crop production. The final note, however, suggests that the future growth of the Velcro crop remains uncertain, and the wise investor should consider investing in zippers and buttons.

The story is interesting, but far far from true.

So the questions arise, who invented Velcro, how, when, and why?

According to my reading, a Swiss engineer by the name of George de Mestral invented Velcro after observing natural field cocklebur plants.

As the record goes, sometime during the early 1940's, he was walking with his dog through the fields. Hunting? Hiking? Or Just walking is dog? Does it matter?

He noticed, or you might say, like most of us who have done the same thing; he was upset by all those cockleburs sticking onto his pants, and socks, the dog's fur, and poking his own skin.



Unlike most of us, however, he did more than just pull the cockleburs off his pants. He observed the strange way the cocklebur hooks into the loops of fabric, fur, and hair. It took a while, but eventually, he figured it out.

While working for DuPont, he noticed that nylon fibers when heated form regular hooks. As a result, in 1957, he filed a patent for a product of hooks and loops which he branded Velcro.

This amazing product is no myth.

Velcro is a fantastic invention with applications in hundreds of different industries and venues. Velcro is actually two matching strips of nylon. One strip has hundreds of small loops. The other has hundreds of small "cockleburs" or hooks on it. When place face to face, the hooks grab the loops forming an immediate and strong bond. With a bit of pressure, the two strips may be pulled

apart without any damage to either strip. The process may be repeated again and again almost forever.

It can be made in many different forms: tapes, dots, strips, sheets, and more. Each set of Velcro consists of a piece with hundreds of nylon hooks per square inch which perfectly grip onto a matching piece of looped Velcro.

Velcro is almost a magical fastener. In many projects, Velcro replaces buttons, snaps, and zippers. Often, Velcro can be used in strips of various lengths from an inch to several inches. Sometimes the Velcro can be used as various buttons or circles. It is nearly invisible when fastened.



Sewing on Velcro is quick and easy. Generally, treat the Velcro as a synthetic fabric. Use a universal needle and stitch the Velcro to the base fabric.

Cleaning Velcro is a snap. Just launder with your garment, bag, or whatever the Velcro is sewn to. It does great. Do avoid strong bleach and other chemicals, however, that might interact with the nylon. The hook side of the Velcro sometimes collects or snags lint, dirt, and other debris, but this is fairly easily cleaned. Use a comb or toothbrush to simply comb out the junk.

CHAPTER THIRTEEN

CUTTING TECHNIQUES

Chapter One

TRADITIONAL CUTTING

WITH SCISSORS

Scissors and shears (larger scissors) have been used for years to cut many different types of materials. The scissor or shear is made by connecting a blade to a handle and then crossing over a second set (blade and handle) so that when you squeeze the handles together, the blades slice against each other cutting the material. The squeezing is described as a scissoring action. To continue this cutting process the handles are pulled apart and re-squeezed repeatedly cutting more and more of the material small sections at a time.



There are many different kinds of scissors: bent sewing scissors, embroidery scissors, large fabric shears, and pinking shears. Each type of scissor has its own specialized purpose to help make your cutting faster, easier, and more

accurate. Good quality bent scissors are a must for any sewing project because they will allow the fabric to lie flat on the cutting table while you slide the scissors forward cutting with ease. Embroidery scissors are small narrow bladed very sharp scissors designed to easily cut embroidery jump stitches, trim excess, and generally do the finest sewing cuts. Large shears are used to cut large sections of fabric. These are common in fabric shops where many yards of fabric are cut every day. Pinking shears are a special finishing scissor designed to leave a triangular finish along the raw edge of fabric. Select your scissors very carefully. Remember this is not the area to scrimp.



Properly holding scissors is a bit of an art form. Notice the index finger actually points down the blade in the direction of the cut while the thumb and the two middle fingers squeeze the handles together. Each time you squeeze, the blades cut part of the fabric or other material, but when the thumb and fingers pull the scissors back apart it is necessary to realign the scissors for the next cut.



Some Basic Guidelines for Cutting With Scissors

- Lay out and cut out along the grainline as much as possible.
- Hold your scissors correctly.
- If you are right handed, you will find it more comfortable to cut along the fabric if it is stabilized by your left hand. If you are left handed, try the reverse.
- Avoid lifting the fabric while you cut.
- Make long generally full blade cuts with steady strokes for straight cuts.
- Make shorter more precise cuts on curves, turns, and other tight spots.
- It is possible to cut along the cut line in tight areas leaving a little extra ease, and go back to more finely trim after the initial cut.
- Take special care around pattern notches to mark these with a short clip of the fabric for later fabric joining. Do not cut notches into the body of a pattern.
- Take your time and be careful to cut smoothly and accurately. If you are not careful, however, the cut can become choppy instead of perfectly straight.

CUTTING WITH A ROTARY CUTTER

A modern alternative to scissors is the rotary cutter. Invented in 1979, by the Olfa company, the rotary cutter has become a must have sewing tool. It is the modern cutting alternative.

Notice in the picture below that the rotary cutter consists of a single handle with a razor sharp wheel shaped blade at one end.

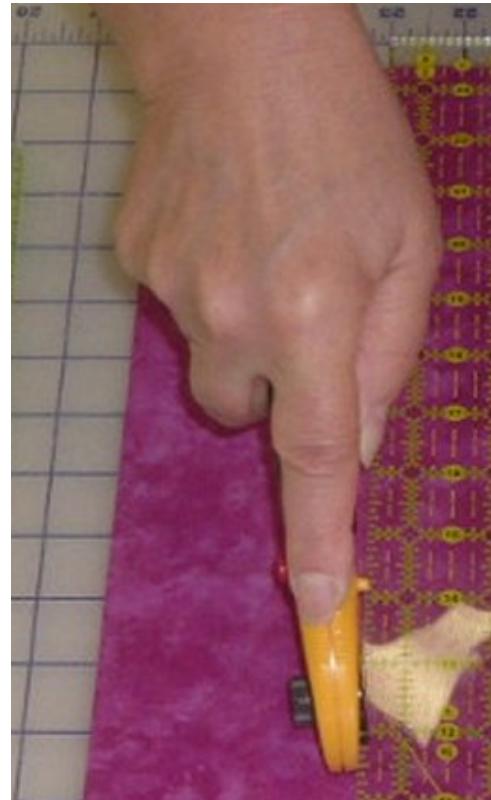
The rotary cutter offers some huge advantages over the more traditional sewing scissors.

First, the **rotary cutter fits snugly in the hand** with fingers wrapped around it for a more even distribution of force over the entire hand.

Second, the **rolling action** of the rotary cutting process **reduces stress and fatigue** on the hand and wrist (especially important for those suffering from carpal tunnel syndrome).

Third, the **safety switch is conveniently positioned** for easy finger tip control which provides an added measure of safety over the open blade of scissors.

Fourth, rotary cutters are designed for **easy use** by those who are left handed as well as those who are right handed without the hassle of purchasing a custom set.



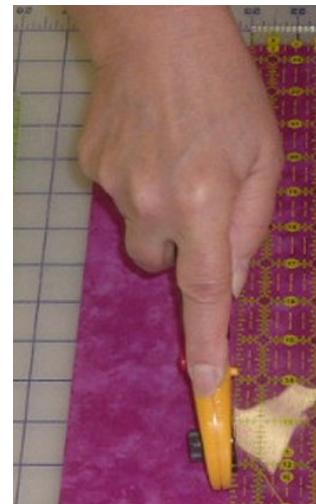
Simply, put the blade on the opposite side of the handle for easy left handed cutting.

Fifth, rotary cutters are capable of **cutting through more layers** of material than scissors which enables faster more efficient cut out time.

Pay special attention to the safety lever (black lever below) on the cutter. It is vital that when you are not actually cutting with the rotary cutter, the safety lever must retract the blade to prevent cuts as well as potential damage to the blade.

Simple Cutting Tips

- Always respect the razor sharp blade and avoid cutting fingers. **Think safety first.** Take special precautions whenever using or storing the rotary cutter around children. Just as with scissors, do not run with a rotary cutter in your hand. Safety first.
- **Always cut with a sharp rotary blade.** Never use a rotary blade that is dull or has a nick on the blade. Replace it.
- **Never use a rotary blade by itself**
 - without being in its proper position in the rotary cutter handle.
- **Keep the rotary cutter clean**, free of oils, free of lint, free of anything that might affect its precision cutting ability.



- **Rotary Cutters do not like pins.** Rolling over even one pin can permanently ruin a blade. Always be sure to remove pins before cutting over them. Also watch for miscellaneous items like staples, and paperclips or anything else that might adversely affect the cutting surface. Even tiny pieces of paper, plastic, or cardboard will affect the rotary cutter cuts. Keep it clean.
- **Hold the rotary cutter firmly** in your hand with your index finger aligned with the blade as a guide so you have full control. Avoid tensing your wrist.
- Use the rotary cutter only on a **fully supported cutting surface**. Use the cutting mat placed on a stable cutting table capable of supporting the cutting process.
- **Prepare your materials before cutting.** Press, fold, smooth, align the materials to insure optimum cutting conditions.
- **Lay out your pattern and/or fabric** for cutting on the cutting table so that all of the fabric is on the table. The tug of fabric draped over the edge can distort your cutting efforts.
- For efficiency, it is recommended that you **fold your fabric whenever possible to permit multiple layers** of fabric (2 to 4 layers) to be cut simultaneously. When greater accuracy is demanded, it is often easier and more accurate to cut one layer at a time. Use some judgment here.
- Also when cutting multiple layers of fabric, use a larger rotary cutting blade. This will make the cut easier.

- Layout your cutting area on top of a **self healing rotary cutting mat**: free of debris, material lying flat and smooth, and use a clear ruler whenever possible.
- **Plastic rulers sometimes tend to slip and slide** on fabric. Be careful. You may purchase special rulers with non slip backing, or you can purchase a special adhesive sandpaper dots or non-slip film to make your ruler non-slip. Check out the Omnigrid® InvisiGrip™ at www.sewinganswers.com or your local sew and quilt store.
- Place the clear ruler edge **precisely where you want to cut**. Keep grainline in mind when setting your ruler to achieve the best possible cut.
- Place the rotary cutter **blade beside the ruler** with the handle rising up at its recommended angle (varies depending on the design of the cutter).
- **Properly position your body**, your hands, your arms, and your feet for optimum cutting control and comfort.
 - Rotary cutters do a great job on longer cuts, but **do not attempt any cut longer than your natural reach**. If you are unsure whether you can reach, do a trial cut in the air with the safety on. Remember, you can cut it again, but if you reach and slip, you may need a bunch of additional fabric.
 - **Avoid reaching**. If you are too tall or too short to cut on the table, fit the table height before cutting. If you slip, fall, or otherwise move, it will mess up your cut.
 - **Avoid attempting to cross over** (one hand over the other) when cutting.



Do Not Do This!

Try placing your **left hand** on the ruler (first third) to hold the ruler in place and provide support. Use your right hand for cutting. (Left handers try the reverse.) Make sure you are well supported while you cut so

you don't slip, and support the ruler so it does not slip.



DO THIS!

- If you find it difficult to support the ruler over a long cut, **stop in the middle of the cut**. Leave the rotary cutter in place. (Do not move it.) **Reposition** your left hand until you have firm support and control. **Continue the cut**. If you have a non-slip ruler, it is very easy to simply walk your left hand up the ruler while cutting. If you are using a ruler that does not have special non-slip protection, make sure you stop every time you attempt to reposition your left hand. The ruler must remain in place fully supported whenever you are cutting.



- **Pull the Safety lever back** exposing the rotary cutting blade. The blade should line up with the ruler, but not cut into it.
- **Press down on the handle of the cutter and roll forward in a smooth cutting motion from beginning to end.**
- **Keep an even pressure on the cutter throughout the cut.**
- **Keep the blade at a sharp ninety degrees to the edge of the ruler.** Tilting the blade may cause the blade to score or cut into the ruler damaging it. Tilting will also distort the cut angle causing layers to be cut at different widths and segments to be cut wrong.
- At the end of the cut, **release the safety.** Always close the blade after every cut. Every time up put the cutter down, make certain the safety is covering the blade. No one wants to get cut. It is also a good idea to wear shoes when cutting. Remember, respect the razor sharp rotary blade at all times.

Rotary cutting is quick and easy. Once you master the cutting techniques you will use your rotary cutter for an unlimited number of sewing and quilting projects.



CHAPTER FOURTEEN

Care And Feeding Of Fabrics and Quilts?

What is the procedure for folding quilting fabric?

Have you ever thought of your quilts as being alive?

Or, have you considered how to care for and feed your quilts?

What does it mean to be alive?

If we mean being alive is the ability to reproduce, or the inclination to move about freely, or the capacity for self awareness; then maybe not.

On the other hand, we often think of something being alive when breathes, changes with the weather, blows in the wind, responds to touch, and influences its surroundings.

Now consider your quilts. They are mostly made of cotton (from a living plant). They respond to the air taking in and releasing moisture and well as other aspects of the air so we describe the quilt as breathing. When exposed to the wind, the quilt responds flipping and flopping about. When we touch and feel our quilt, it gives us a special sensation of comfort and warmth. Indeed, the quilt often has dynamic influence on the lives of the people who see and touch it. So, maybe your quilt has some life in it after all.

Whether it is alive or not, your quilt needs and deserves some very special care and feeding.

Before the quilt is even born, it is an idea in the mind of the quilter. It takes hours, days, maybe even months to see that tiny seed grow and develop into a real quilt. There are so many steps involved in the birth of a quilt, hundreds of books have been written about the vast number of design options, the myriad of techniques, and the whole process in general. In this article, however, we want to focus on the basic issue of how to care for the fabric before and after the birth of the quilt. If you think about it, the fabric is the quilt.



While other fabrics are sometimes used in crazy quilts and other special quilt projects, the vast majority of quilts are made of 100% cotton fabrics. These fabrics come in so many different colors, designs, and prints that it boggles the mind. Of course the fabrics are what make quilting so much fun.

Did you know that there are different qualities of cotton quilting fabric? Yep.

The next time you go to a fabric store or quilt shop, just feel the density or thickness of different fabrics. Hold a piece up to the light. It doesn't take most people very long before they begin to see little differences. These differences come from three different sources: greigh goods thread count, finishing processes, and printing/dyeing processes. The greigh goods are the cotton fabrics before they go through the final finishing processes. One of the big issues here is the number of cotton threads per square inch of the fabric. If the fabric has 75 count, it is less durable and less quality than a fabric with a 300 count. The more threads you have per square inch, the better the fabric will be.



The finishing processes include lots of technical stuff: soaking in chemicals, rinsing, combing, etc. The more

refined a piece of fabric is the better it is. Finally the printing/dyeing processes affect the quality of the fabric. Mistakes here are common. In fact many retail stores specialize in selling seconds and bolt ends.

How can you make sure you are buying the best fabric for your quilt?

1. Find a reputable fabric retailer. Get to know the owner and find out what their philosophies, values, and priorities are as it relates to the fabrics in their store.
2. Learn all you can about fabric. There are many books and often classes are offered at upscale sewing stores and textile colleges.
3. Inspect the fabrics. Look for flaws. Look at the light through the fabrics. You will see one fabric is thinner or thicker than others. Feel the texture of the fabric. How do you want it to feel?
4. Select the colors, prints, or patterns to your own exceptional tastes.

Once you have selected the right fabrics for your quilt, you need to decide about things like potential bleeding, shrinkage, residual chemicals in the fabric. While some people just skip this step, it often comes back to cause great disappointment later. Why would anyone skip the fabric preparation stage? Lack of information or Shortage of Time may be the answer, but it is important to remember: Fabric preparation often reveals the flaws in the fabric. Many fabric companies have worked hard to provide quilters with good quality colorfast cotton quilting fabrics, but it is much better to be safe than sorry.

Prevent Bleeding.

I know we talked about your quilt being alive, but I am not suggesting that real blood comes out when you cut a piece of fabric. On the other hand, sometimes when some fabrics get wet, they bleed. This is especially noticeable with reds. If you wash your finished quilt without first prewashing and setting the colors, the vivid red and purple dyes may well bleed all over the rest of the quilt ruining it. So, prevent bleeding. No, don't use a bandaid. They don't work.

- **Use A Bleed Test.** Double Check before using a fabric to insure that it is color fast (won't bleed) by using a bleed test.
 - Cut a two to three inch square piece of each fabric you plan to use.
 - Mix some washing solution in a large dish or pan, pour in a water soap solution just like you would use in your washer to wash the quilt in the future. The temperature should also match your washing situation as close as possible.
 - Set the square of fabric into the bowl or pan of washing solution. Make sure you dunk it so it really gets wet, and doesn't just float on top of the water.
 - Wait thirty to forty five minutes or so.
 - Check the color of the water. If the water has a colored tint, the fabric was not color fast. It did bleed.

- If the color of the water was clear, it does not necessarily mean that the fabric is colorfast.
 - To double check, take the fabric out and lay it on a piece of white paper towel.
 - Wait a few minutes. Lift the fabric piece.
 - Is there color on the paper towel?
 - Yes, then it may still bleed onto other fabrics in the quilt.
 - No, then it is likely colorfast.
- **Prevent catastrophe by pre-treating the fabric** with a color stay product.
- A cap full of Synthrapol or similar product (read directions on bottle) per load of wash will usually clean away loose dyes preventing most bleeding, but may not prevent all transfers from actual contact with another fabric.
 - In the worst cases, it may be necessary to treat the fabric with a dye fixative like Retayne to set the dyes.
 - Once you have treated the fabrics, do another bleed test just to be sure.
- If the quilt is already assembled (sewn together) without having been prewashed, perform the bleed test before washing the quilt.
- The bleed test should be done on each of the various fabrics in the finished quilt especially

those with bold colors.

- Use a cotton swab or cotton ball.
- Dip the cotton swab into warm water and rub it on the fabric pieces.
- Saturate the fabric with the water, but do not soak the quilt. Test the top layer of the fabric only. Avoid soaking the other layers of the quilt.
- Inspect the cotton for any color transfer. If the cotton changes color, it will likely bleed if you wash the quilt.
- If you see no color transfer, there is still a chance that if the quilt is exposed to a full soaking, soap, and heat; it may still bleed.

PREVENT SHRINKAGE

Natural fibers tend to shrink whenever exposed to heat and moisture. I remember my older brother had this beautiful pull over sweater made of wool. Accidentally, the sweater got into the warm wash. When it came out, it was funny. My brother was certainly not happy, but it was funny to see that large man's sweater mysteriously turn into a perfect doll's sweater.

Cotton fabrics shrink too. Although, cotton does not typically shrink to the degree that wool does, even a little shrinkage can alter the fabric significantly. Cotton is a natural fiber produced from a plant grown much like soybeans in fields by farmers. The fibers are processed, stretched, pulled, and straightened. Various coatings are applied for stiffening to the fibers and threads produced.

These threads or yarns are woven together to form the cotton fabric. Exposure to heat and moisture causes the fibers to relax or go limp like the original state of the fiber. This is the shrinkage process.

Washing the fabric in a washing machine causes the materials to absorb moisture. The result is shrinkage. Applying heat in the dryer amplifies the problem. The amount of shrinkage varies from fabric to fabric. If you can imagine, you just finished a queen size quilt. It has taken maybe a hundred hours of tender loving sewing. You neatly laid the finished quilt over the back of the couch. A few days pass and the grandchildren come to visit. One of them comes in and jumps up on the couch with his dirty shoes and the dirt goes straight on to the your magnificent quilt. You quickly try to rescue the quilt, but it is soiled, maybe permanently. What are you going to do?

Obviously, the solution is to wash the quilt, right?

Sure, but only if before you ever started sewing you fully prepared your fabrics. If not, ouch!

When cotton is exposed to moisture and heat, it not only shrinks it does so in unpredictable and inconsistent ways. If you have a whole quilt of different cotton pieces, you may get a bunch of puckers, pulls, and distortions. This is due to the irregular ways cotton shrinks.

Some quilters prefer to use unwashed fabrics during construction of the quilt, and then do a careful moistening and stretching in an attempt to control the shrinkage while producing an appearance of aging.

It is usually best, however, to do a pre-wash or pre-shrinking of fabrics so the finished product will have a much more polished appearance.

Prewashing accomplishes several things at once.

1. It removes the excess chemicals, sizings, protective coatings, debris, and loose fibers. These excess chemicals can be big irritants if you are sensitive. Their touch, smell, and feel can make working with the fabric a challenge. After washing, the fabric is far easier to handle.
2. It removes some of the crispness of the new fabric. The fabric takes on a bit softer appearance, but if you prefer that crispness of new fabric, it can still be yours. Just use a can of spray starch or sizing and spray a light mist over the fabric. That crispness returns. Now you have control over the chemicals. Take a look at the ingredients label to see exactly what chemicals you may be adding. Choose a spray that is less irritating by scrutinizing those ingredients.
3. It allows the fabric to shrink before it is sewn. Once the fabric shrinks, it may shrink more when further exposed to moisture and heat, but the shrinkage is significantly reduced.

Here are some simple steps to prewashing:

1. Use a large washtub, large dish pan, bathtub, or clothes washer.
2. Fill it and prepare a cool washing solution of premixed mild detergent, Ivory Soap Flakes (not powdered detergent) or Orvus soap. Never use any soap containing bleach or other harsh chemicals that could ruin your fabric. Thoroughly stir the soap in the water so it completely dissolves before adding fabric. Check with your sewing expert at your closest

sewing center or quilt store for more details.

3. Unfold the fabric to be washed. Gently place the fabric into the washing solution. Push it down into the water. Soak the fabric thoroughly.
4. Gently agitate or swish the fabric by hand or by machine using maximum delicate cycle. Do as much soaking as washing.
5. Thoroughly rinse the fabric to remove all the detergent or soap.
6. Air dry at room temperature or dry in a clothes dryer at low heat and use the delicate cycle.
7. Remove the fabric from the dryer as soon as the fabric is dry.
8. Once the fabric is thoroughly dry it may be pressed with an iron, but it is usually optimum to do so just before you begin cutting and sewing with the fabric. Pressing should be done with a hot dry iron to press out the wrinkles from the fabric. Once done, the fabric is ready to cut and sew.

After many hours, you complete your quilt top, you have it quilted with a long arm quilt sewing machine. It is all done, a true masterpiece, a treasure for the ages.

From this point on the issue is how do you keep the quilt fresh and new forever. Like most things that die, decay is common. Many different forces can affect the quilt causing it to wear and deteriorate. Here is a list of some of the more common things that can cause your vibrant quilt to grow old and die before its time.

1. **Daily use.**

- a. The more a quilt is handled the more it wears.
- b. Oils from our hands, folding and unfolding, and general use causes wear.
- c. Quilts were originally designed to be used as covers to keep us warm while we sleep. I remember Mrs. Berry an elderly widow who lived just a short distance from our farm when I was growing up. She gave my brother and I our own quilts for Christmas one year. I don't exactly know what happened to my brother's quilt, but mine lasted twenty years until it completely fell apart. I loved that quilt. I slept with it every night. But it has been gone now for about thirty years. It is only a memory now – not to be confused with a memory quilt.



2. **Washing and Drying** a quilt repeatedly will stress the fabric and stitching causing rapid deterioration especially with mechanical agitation, hot water, and drying.
3. **Dry Cleaning** is not any better because dry cleaning uses a variety of chemicals that can damage the quilt.
4. **Exposure to light** is like placing a laser beam on the quilt, burning, penetrating fibers, color fading, and general damage. Light causes the fabric to lose its fiber strength.
5. **Exposure to extreme temperature and moisture** changes can be catastrophic. The fabric swells and shrinks, swells and shrinks. Gradually, the fabric loses its resiliency. The threads stretch and shrink due to exposure and quickly break down.
6. **Mold** is a huge problem. Mildew and mold are tiny spores that literally eat into the fabric.
7. **Insects** like ants, moths, worms, larvae, eggs, and others can destroy the fabrics very quickly doing permanent damage. Wool is even more vulnerable than cotton. Wool batting may come under attack by insects causing decay inside out.
8. **Dust** and dust mites ravage a quilt over time.
9. **Dirt** quickly stains and discolors.
10. **Air pollution** can penetrate the fibers causing foul odors as well as fiber deterioration.

11. **Improper storage** can also contribute to the wear and tear on the quilt.

There are actually three venues involved in preserving a quilt.

1. The first is the venue of how it is used and treated **during use**.
2. The second venue is the **cleaning**, repairing, and restoration of the quilt.
3. The third is how it is **stored** and treated during storage. In both venues, the major concern is to eliminate those things already mentioned that cause the premature wear and tear and decay of the quilt.

If a quilt is properly cared for and the above sources of quilt damager are avoided, a quilt will last a long long time.

1. During Use:

Quilts are not intended just to be boxed up and placed in storage.

Quilts are created for a purpose, and that purpose includes being used either for the practicalities of bedding or the artistic expression.

When I was a kid, a quilt was an extra special, extra warm and comfy blanket to be used nightly on my bed.

Today many Quilts are treasured masterpieces that deserve to be seen, admired, and displayed. The hours and skills necessary to produce a quilt are worthy of recognition. Therefore, a quilt deserves at least a portion of its life to be on display, used, and treasured.



Here are some suggestions for properly handling, using, and displaying your quilt.

- ❖ **Handle quilts with clean hands only.** Our hands commonly have oils, chemicals, sweat, and residue from everything you have touched. These residues, chemicals, etc. can damage your quilt when you touch it. Solution: Wash your hands before handling the quilt. It may seem extreme, but if you are handling a vintage quilt worth a few thousand dollars, you may be wise to wear clean cotton gloves when handling the quilt.
- ❖ **No Plastic Bags.** Do not put your quilt into or onto plastic surfaces. Plastic bags often contain polyvinyl chloride or other chemicals that can damage the quilt.

- ❖ **Horizontal Display.** The best way to display a quilt is over a bed horizontally. Avoid permitting the quilt edges to drape over the edge of the bed, and avoid stressing the quilt by hanging unsupported. Keep the quilt from dragging the floor. Also avoid contact with metal or wood bed frames.
- ❖ **Avoid Light.** Protect the quilt from exposure to ultraviolet and sun light. Here in Texas, grass under a shade tree will grow all summer long full of its flexible natural green color. Grass that is not shaded by a tree, will turn dark brown and it will lose its flexibility. It feels like dried straw baked by the hot Texas sun. The same thing happens to quilts exposed to ultraviolet interior lighting or sun light. Damage from light is permanent.
- ❖ **Avoid folding and creasing.** These folds provide opportunities for dust, insects, and other damaging sources to collect. Avoid stacking quilts for the same reason.

Hanging quilts is quite popular, but there are some problems with hanging them.

- ❖ The walls themselves may cause problems. Outside walls are often damp and may have extremes of temperature and moisture. This can promote mildew and mold.
- ❖ Hanging quilts may put undue stress on the fabric stretching it under its own weight. Only hand quilts that are in good condition. Take precautions to even distribute the weight across the entire quilt. Nails, pins, staples, and other

similar fasteners are to be completely avoided. Putting holes in a quilt do permanent irreparable damage to the quilt.

- ❖ Avoid hanging quilts over radiator, electrical outlets, fireplaces, air vents, kitchen appliances, humidifiers, and similar high risk areas.
- ❖ The way quilts are attached to the rod or hooks for hanging can cause problems. The recommended way to hang a quilt is to sew a rod pocket along the top of the quilt through which the rod passes. This provides consistent support across the full length of the quilt. A rod pocket is easy to make. Simply cut a piece of fabric wide enough to wrap around the rod or holder plus $\frac{1}{2}$ " for ease, and an inch and a half for seam allowances. Cut the strip the same length as the quilt plus two inches. Fold over one inch on each end and stitch closed. Fold the strip in half and sew it to the backing of the quilt. Open the pocket and slide the rod or holder through it.
- ❖ Enameled drapery rods, special decorative rods, and wooden poles may be used to hang quilts, but avoid direct contact with the quilt itself.
- ❖ Tab tops are also popular, but do not provide as much support. Note: avoid hanging worn or fragile quilts. Make sure the quilt can handle the downward stresses of hanging.
- ❖ Avoid contact with wooden poles or quilt holders. Avoid metallic grippers in contact with the quilt. If you are using grippers cover them first with a fabric cover so only the fabric makes contact with the quilt itself. This protects the quilt from the

hangers.

- ❖ Suggestion: Display quilts for a limited time only. After several months, place one quilt in storage and place another quilt on display. In this way, the quilts will remain in good condition.
- ❖ Quilts may also be displayed on special quilt display racks. The larger the quilt is, the more difficult it is to display the quilt. Avoid folding the quilt if possible. Simply drape the quilt over the rack. If you need to fold the fabric, fold the fabric together with a special acid free tissue inside the fold to protect the quilt.

2. Cleaning & Restoring A Quilt

A quilt that is used whether as a comforter as part of bedding or displayed prominently, is a quilt that gets worn, dirty, and needs care.

Periodic inspection during use is a good idea, but eventually a thorough inspection to care for the quilt is necessary. Look for the signs of damage.

- ❖ Inspect the threads. Look for broken and loose threads along the seams.
- ❖ Look for flaws, wrinkles and puckers.
- ❖ Inspect the fabric for signs of shrinkage or bleeding such as distorted fabric shapes, irregular grainlines, and other distortions.
- ❖ Examine the surface of the quilt for stains and dirt spots. These may be spot cleaned or may require more general cleaning applications.

- ❖ Mildew and mold are unsightly and highly damaging, but it is not possible to fully clean and eradicate them. Damage is likely permanent.
- ❖ Look for holes, rips, and tears in the fabric. Heavy use and carelessness can make a mess out of the best quilt. Many times small holes, rips, and tears can be at least partially repaired. It is essential that these be repaired before washing or more extreme cleaning efforts are taken. Otherwise, these flaws may get worse.
- ❖ Check for any prior repair efforts. Is the previous effort still in tact or does it require additional repair before proceeding?
- ❖ Study the quilt for discoloration, fading, bleeding, and other signs of exposure to ultraviolet light or other abuse.
- ❖ Scrutinize any creases in the fabric, any folds that may become set in over time.

The result of your quilt examination should lead to an obvious conclusion: What can be done to restore the quilt? Here are a few simple options:

- ✿ Dust It. Remove lint, loose debris, dust, and flaking dirt from the surface of the quilt by using a dusting brush, a Velcro styled lint remover, or lint free cloth. Be very careful to avoid damaging the surface of the quilt while gently brushing away loose dirt. Never use any type of dusting assist such as Endust or Pledge.
- ✿ Vacuum It. You vacuum can be a great cleaning tool to remove dirt, dust, and debris. However, many vacuums have more suction than your quilt may be able to tolerate. To compensate, some vacuum cleaners have special adjustments to reduce the

amount of actual suction reaching the surface of the quilt. Many vacuum cleaners come with special dusting attachments that aid in the removal of dirt. Do not use any type of carpet sanitizer or freshener on a quilt. If the quilt is especially fragile, lay the quilt on a clean floor and stretch it out. Cover the quilt with plastic or nylon screen netting (like that available for screen doors). Vacuum through the netting screen to reduce damages to the fabric.

+Wash It. Never Dry Clean! Beware before wet washing! Two of the biggest enemies of a quilt are heat and moisture. Even if the fabric was preshrunk, it may still respond poorly to washing. Consider the following before deciding to wash your quilt:

- o Examine the fabric content of the quilt. Is it delicate or vulnerable to heat or moisture?
- o Is it likely that the fabric would bleed when exposed to washing moisture?
- o Is the fabric in delicate condition?
- o Does the quilt have beads, feathers, drawings, yarns, or other embellishment?
- o Does the quilt have surface damage? Before washing repair all rips, holes, worn spots, tears, or frayed seams?
- o Is this quilt super special (high value antique)?
- o Has the fabric been prewashed and preshrunk? If the cotton fabric has a shiny glaze, it has likely not been prewashed.

As you examine these features, if none of these elements seems likely, washing may be appropriate. If your inspection reveals any of these problems to be prominent, avoid wet washing entirely.

⊕ How to wash a quilt: Here are some simple steps for washing a quilt:

1. Disclaimer: Washing a quilt will almost always damage a quilt or at least increase its natural aging process.
2. Spot cleaning is always preferable to wet soaking washing. Using a damp sponge or clean cotton cloth, rub dirty spots to clean them.
3. If you must wash a quilt do not place a delicate quilt into an automatic washing machine or dryer. Use a large washtub or bathtub.
4. Fill the tub with cool washing solution. If you have water with high chlorine or mineral content, either filter the water or use processed (bottled) water. Remember minerals and chemicals in the water itself can damage the quilt. Mix mild detergent, Ivory Soap Flakes (not powdered detergent) or Orvus soap. Never use any soap containing bleach, "brighteners", or other harsh chemicals that could ruin your quilt. Thoroughly stir the soap in the water so it completely dissolves before adding the quilt.
5. Unfold the quilt to be washed. Gently place the fabric into the washing solution. Push it down into the water. Soak the fabric thoroughly.
6. Gently agitate or swish the fabric by hand. Rub especially dirty spots. Do as much soaking as washing. The quilt should soak at least fifteen to

thirty minutes. During this soaking, it is necessary to force the washing solution through the fibers of the quilt. This may be done by hand, walking (wading) back and forth on the soaking quilt, or by gently lifting and agitating the fabric using an extra large plastic spoon.

7. When washing is complete, drain the tub and add rinse water over the quilt still in the tub. For better rinsing (but more work) remove the quilt from the tub. Use a bedding sheet. Stretch the sheet under the quilt and roll the quilt onto the sheet. Avoid lifting the wet quilt itself, because the fabric may tear under pressure. Instead, lift the quilt out of the tub using the sheet.
8. Empty the cleaning solution from the tub and fill the tub with fresh clean rinse water. Thoroughly rinse the fabric to remove all the detergent or soap.
9. If the rinse water turns dark, remove the quilt again, and refresh the rinse water. Place the quilt back into the rinse (repeating the rinse process several times) until the rinse water no longer turns dark grey or black. Be sure all the soap has been rinsed out of the quilt, or the soap will unduly attract new dirt.
10. Remove the quilt after thoroughly rinsing it. Drain the tub a final time and place the quilt in the tub to drain. Gently squeeze or push out as much water as you can by hand, but do not twist or wring the fabric. The fibers of the quilt are at their most vulnerable condition when wet, so treat them gently. Avoid using a mechanical ringer or other device that might unduly stress the quilt.

11. Remove the wet quilt from the tub by using a bedding sheet (stretch the sheet under the quilt and roll the quilt onto the sheet) to carry the quilt to where it can be thoroughly dried.

12. Air dry at room temperature.

- ✓ Ideally lay the quilt over a plastic wire screen mesh frame to allow the air full circulation. A screen frame is fairly easy to make with supplies from your local hardware store.
- ✓ An alternative is to lay the quilt on the ground. Place a sheet under the quilt to protect it against dirt and grass stains. Place a second sheet over the top of the quilt to protect it from the sun, insects, and flying debris.
- ✓ Do not place a delicate quilt into a hot automatic clothes dryer.
- ✓ It may be necessary to turn the quilt over to assist drying.
- ✓ Make sure, however, the quilt is thoroughly dry before moving to storage or display. It may take several hours or even days to dry thoroughly. Be patient. You are preserving a treasure.

13. Once the fabric is thoroughly dry it may placed in storage or displayed. If the quilt appears unduly wrinkled it may be pressed with an iron, but avoid using steam.

3. Storage

When a quilt is not being used, it needs to be properly stored. Improper storage will ruin the best of quilts.

What not to do:

- ✓ Store quilts in plastic bags or boxes. These may promote mildew and mold.
- ✓ Store quilts in the basement, garage, or attic.
- ✓ Store quilts in direct sunlight.
- ✓ Store quilts where insects and rodents can reach them.
- ✓ Store quilts in the linen closet.

What to do:

- ✓ Document your quilt before you forget. Many times we finish a project after hours, days, even months of dedicated labor and forget to label it. Years later, we can't quite remember when and why we made the quilt. So, first things first. Create a quilt label and hand sew or otherwise attach it to the back of the quilt. Include when the quilt was made; who made it; for whom it was made; the occasion or purpose.
- ✓ Repair, refurbish, and clean the quilt before placing it in storage. When the quilt is stored in its best possible condition, it will come out of storage in its best possible condition.
- ✓ Store the quilt in a dry, well ventilated, climate (temperature and moisture) controlled, low light, dust free environment. Does that sound like your spare bedroom? Right on! This is one of the best

places to store a quilt. Lay the quilt on the bed over the mattress pad and under sheet so that the quilt is fully supported and does not flop to over the edges or drag the floor. If you have several quilts to be stored, it is permissible to layer them one on top of another. A sheet spread over the top of the quilts will prevent dust collection.

- ✓ Quilts may also be rolled up for storage. To do so, spread the quilt out and spread a protective sheet (acid-free paper or tissue, clean sheeting like muslin or Tyvek) over the top that is several feet longer than the quilt. Roll the quilt up keeping the protective sheeting material covering all contact points. The goal is to insure that the entire quilt is blanketed with the protective sheeting. Interlace the protective sheeting thoroughly to maximize the protection. A tube may be useful as a core around which the quilt can be rolled, but whether using a cardboard tube or a plastic pipe cover the tube with the protective sheeting before rolling the quilt. Once rolled the protective sheeting should wrap the quilt several more times for greatest protection. The protective sheeting should protect against most of the elements that cause deterioration. The quilt roll should be turned periodically to prevent the quilt from flattening out on the bottom.
- ✓ Once rolled the quilt may be placed in a special storage box or tube for long term storage. Ask your local quilt shop about local sources for storage containers.
- ✓ Folding is usually discouraged especially for more fragile quilts, but if you must fold. Use the same basic principle as above for rolls. Layer the quilt with protective sheeting. Also use an accordion

style fold. Be aware that the folds may set in creating a permanent crease in the quilt.

CHAPTER FIFTEEN

What are sewing safety tips?

What are safety tips for the sewing machine?

Sewing and quilting are among the absolute safest hobbies to engage in. Normally you should not face any gigantic explosions. You should not expect to fall perilously through the skies or off a cliff. You should not anticipate ferocious animals charging at you from the bush. It is unlikely that you will suffer high voltage shock. Sewing is indeed, safe. However, certain precautions are recommended to insure the full enjoyment of your hobby free of calamity.

Here are some common sources for problems:

- ✓ Sharp Objects
- ✓ Chemicals And Tactile Sensitivity – Allergens
- ✓ Electrical Shock
- ✓ Dirt and Lint
- ✓ Burn Potential
- ✓ Clutter
- ✓ Posture
- ✓ Exposure to Heat

1. SHARP OBJECTS

Sharp objects often create dangers. The manner in which we use and handle sharp objects determines the degree of risk and potential severity of injuries. Engaging in the hobbies of sewing and quilting involves several sharp objects that require cautious use. These sharp objects

include: needles, pins, shears, scissors, rotary cutters, embroidery scissors, seam rippers, and similar tools.

✓ **Needles:**

- The most dangerous needle is the one on the sewing machine that speeds up and down at six hundred and fifty penetrations per minute. The sewing machine needle is capable of driving straight through a finger nail, skin, and bone. Many a seamstress has felt the agony and seen the blood splatter from placing their finger too close to the needle.
 - To avoid this danger, learn to properly guide the fabric through the sewing machine.
 - Position your left hand to the left of the needle two to three inches away from the needle. Use your left hand to smooth the fabric as it advanced through the feed dogs.
 - Take hold of the fabric edge with your right hand and guide the fabric toward the needle from about two inches to five inches ahead of the needle.
 - Do not place either hand behind the needle. Allow the feed dogs to advance the fabric. Do not try to force the fabric through the machine.
 - Avoid breaking needles because they can potentially fly into the air and become dangerous projectiles.
 - Use good sewing technique, and very few needles will actually break.
 - Change needles frequently.

- Avoid forcing the fabric through the machine.
- ✓ **Loose Pins And Needles:** Loose needles, hand sewing needles, and pins are also potential sources of danger.
 - Use a pin cushion or magnetic pin cushion to hold loose pins and needles.
 - Avoid allowing loose pins and needles to lie on the table or fall on the floor. Pick them up immediately. A needle driven through the foot is a pain.
 - When using hand sewing needles be careful to hold the needle properly and use a thimble to protect your receiver finger.
 - Caution is essential.
- ✓ **Scissors** are designed to cut. Whether the scissors are large shears, basic sewing scissors, small embroidery scissors, or thread clippers; scissors of all types are intended to be sharp and to cut. Therefore, caution is essential when using all of these tools.
 - Do not run with scissors in your hand. Do not walk with open scissors in your hand.
 - Do not hand someone scissors with the blade extended toward the receiver. Instead, turn the scissors around and hold the blades yourself as you hand the handle portion to someone else.
 - Learn how to properly hold your scissors. Hold your sewing scissors you're your index finger aligned with

the blade to properly guide and control the cut.

- Learn how to use them correctly.
 - Always close scissors when not in use and store them in this manner.
 - Keep scissors sharp.
 - Practice good use habits and you will avoid many dangers.
- ✓ **Rotary cutters** have very sharp circular blades. They are fully capable of slicing off skin or slicing deep painful cuts.
- To avoid the dangers always use the safety guard on the rotary cutter. Every time you put it down, slide the safety on. Never leave the blade exposed.
 - To prevent cutting yourself, use the rotary cutter only as recommended by the manufacturer. When cutting with a rotary cutter, use an acrylic ruler to guide the cutter, and use a rotary cutting mat to roll the blade against when cutting.
 - Avoid reaching while cutting. Do not cross over your hand to cut. Reposition yourself as needed to maintain control and cut safely.
 - Always store rotary cutters with the safety on. Proper cutting habits will help prevent mishaps.
 - Replace dull or chipped blades.
- ✓ **Seam Rippers** can be tricky to use and include both a sharp blade and a sharp point.

- Learn how to properly use the seam ripper and practice safe ripping. When you need to rip out a seam, hold the seam ripper firmly in your right hand while holding the seam open with your left. Slide the blade of the seam ripper under the threads and while pressing forward away from you, cut the threads against the sharp blade of the ripper.
 - Do not use the seam ripper pointed toward yourself. Always rip away from your body.
 - A slight slip could really hurt. Seam rippers come with covers or cases to prevent problems. Always store seam rippers in their cases.
- ✓ **Other sharp sewing equipment** such as an awl, a buttonhole cutter, and even tweezers can be dangerous if used improperly.
- Whenever using sharp tools, point the tool and cut with the tool away from your body.
 - Keep all cutting tools off the floor. Keep all cutting tools in obvious places, and do not bury them under patterns, fabric, or other materials. Always expect sharp tool to slip, roll, fall, or otherwise accidentally move to dangerous places. Anticipate. Prevent. Stay alert.
 - Always cut slowly. Stop if you sense your grip is slipping.
 - Always wear shoes when sewing. I know, it just feels better to go barefoot, but if you drop a sharp tool your shoe can be very helpful protecting your feet. If you do drop a sharp tool, quickly move out of the way.

1. CHEMICALS

Sewing and quilting uses a variety of aerosol sprays, liquids, and chemical content. Exposure to chemicals in the air and on surfaces can cause serious harm if breathed, ingested, or absorbed through the skin or eyes. When we use these chemicals, we seldom know what chemicals are contained in the sprays and liquids we use. We are usually unaware of what chemicals pose what risks. Manufacturers work very hard to avoid putting toxic chemicals into their products, but many times the chemicals and substances cause allergic reactions. Our individual sensitivities impact may affect one person and not another. What we can be certain about is that, there is risk here.

Aerosol Sprays put chemicals into the air. We often use spray adhesives. We use steam from our irons, spray air to clean our bobbin areas, spray stabilizers, spray cleaning solutions, spray dusting aerosols, spray starches, and a variety of other sprays. Generally, these do not pose huge risk factors, but they can. If we are especially sensitive to certain substances, they can cause severe repercussions.

- ✓ Avoid breathing aerosol sprays. Avoid breathing gasses.
- ✓ Always work in good ventilation – rooms with good air circulation. When spraying, do it outside if possible.
- ✓ Always spray away from you.
- ✓ When using a product for the first time, thoroughly read the ingredients and any cautionary directions.
- ✓ If the spray is particularly toxic, odorous, or objectionable; consider wearing a surgical mask, dust mask, or respirator to protect yourself.

These may be purchased at local hardware and medical supply stores.

Liquids put chemicals on surfaces. Liquid adhesives like Superglue can create problems. We use oil to lubricate the hook. We use cleaning solutions to clean the outer surfaces of our tables, sewing machines, and other surfaces. We use creams and pastes. Normally, we don't notice much risk, but the potential is there for exposure to chemicals that may irritate and cause health risks.

- ✓ When using a product new to you, thoroughly read its ingredients, directions, and precautions.
- ✓ When appropriate use disposable paper towels, or clean fabric rags to spread liquids.
- ✓ Follow the directions thoroughly.
- ✓ Avoid skin contact with chemicals. Whenever it is necessary to actually touch the liquid, paste, or other chemical; use protective gloves.

Content of the materials we use is laced with all kinds of finishing chemicals. Fabrics, elastics, trims, and other materials contain many unknown chemicals. Often these chemicals are absorbed into the skin or aerated by cutting and manipulating the materials.

- ✓ Be aware. Be alert to the risks.
- ✓ Be conscious of your own body responses. If you feel woozy, nauseated, get a head ache, or your eyes become irritated while you are handling materials, presume that you are sensitive to something in the materials.

- ✓ If the material causes a reaction to your skin, wear protective gloves when handling the material.
- ✓ I am especially sensitive to wool. No, it is not toxic or dangerous to most people, but every time I work with wool I break out. I choose to avoid working with wool as much as possible. There are so many other fabrics, I still have lots to choose from. If you know you are sensitive to a particular material, just avoid it. Or, wear protective gloves and clothing if you must work with it. Gloves are far more comfortable than itching, scratching, and burning skin.
- ✓ Prewashing will usually remove most of the surface chemicals from fabric. Prewashing is a good idea before using fabrics both because it removes undesirable chemicals and because it preshrinks the fabric making it more stable after sewing the project.

✓

2. ELECTRIC SHOCK

The sewing machine is an electric appliance. In Europe, the sewing machine connects to 240 Volts AC. In the United States, the sewing machine connects to 110 Volts AC. Touch the wrong spot and "Ouch!" Electric shock can really hurt. It has been known in rare cases to even cause heart attacks. A bad wire, moisture grounding, and other circumstances may cause electrical spark or shock. This is a very real risk, but one you should be able to avoid.

- ✓ Inspect your electrical outlet and power cord. Do you see any frayed wires? Do you see any burn marks? Is the outlet overloaded with multiple plugs. If so, have the wires repaired before using your sewing machine.

- ✓ Do not remove the casings or covers of your sewing machine. Avoid this especially if your machine is plugged into the power outlet.
- ✓ Avoid eating or drinking near your sewing machine. Moisture is a huge enemy of electricity. A spill can be disastrous for your sewing machine.
- ✓ Keep the machine away from all forms of moisture including wet floors. Do not mop the floor and sit down to sew. Wait for the floor to thoroughly dry.
- ✓ Keep your sewing machine in a dry fully climate controlled environment free of temperature and moisture swings. Store your machine at room temperature.

3. DIRT AND LINT

Dirt and Lint are big enemies of your sewing machine, but they are also possible problems for your fabric and yourself. Dirt and lint can interfere with proper sewing machine operations increasing the risks of breaking needles which may fly into the air causing harm. Use of certain threads and other materials increases the volume of dust and lint often causing them to become airborne exposing the user to airborne allergens and toxins. They also have the potential of aerating the dust and lint for possible breathing.

- ✓ Clean your sewing machine bobbin area at least every few hours of use. Do not permit lint to accumulate. Many times when I take a sewing machine in for service, I take off the needle plate exposing these neat felt pads on the feed dogs. I have even had customers get upset with me when I remove these felt pads. Fact is there is not felt pad, it is pressed and piled lint.

- ✓ If you use poorer grades of thread such as cotton covered poly threads, clean more often. Reduce the amount of thread lint by using a needle with a larger eye and by slightly decreasing tension settings to reduce stress on the thread fibers.
- ✓ Even better, use better threads that do not leave gobs of white powder and lint behind.
- ✓ Carefully use canned air to blow away the lint and dirt. Use a small brush to brush away the lint. Always blow away from you, and avoid breathing the airborne lint and dirt.
- ✓ Avoid getting dirt and lint on your skin or breathing it in the air. It may not be toxic, but no one really enjoys sneezing. Dirt and lint are just not good for you.

4. BURN POTENTIAL

Sewing and quilting involve using pressing equipment. This equipment includes traditional steam irons, steam presses, and small focused irons. All of these heat up hot. Pressing cottons especially requires a high heat. Other fabrics may press with less heat. A single touch on human skin and the skin may be permanently scarred. Burns are real dangers in the sewing room. What can you do?

- ✓ Inspect the electrical connections (cords, plugs, and outlets). Do not use appliances with frayed cords. Fix them before proceeding.
- ✓ Dedicate a specific area for pressing equipment free of clutter and away from other areas of the sewing room.

- ✓ Turn the heating elements on when you start pressing and turn them off as soon as you finish. Do not leave them on idle even for a few minutes.
- ✓ Use great care in how you actually use these tools. Avoid reaching. Avoid crossing over your hands. Avoid awkward movements. Properly support the materials and stop if you anticipate or encounter any kind of problem.
- ✓ Unplug all pressing equipment when you leave the room.
- ✓ Whenever you are dealing with pressing equipment, think hot means fire and burning. Keep a fire extinguisher close at hand and take all the normal precautions when you might anticipate a fire.
- ✓ Do not spray flammable chemicals near a hot iron.

5. CLUTTER

Clutter is everywhere. Maybe it is inescapable. We find clutter on our desks, in the living room, in the kitchen, and especially in the sewing room. Wherever we go clutter seems to follow. So what. Clutter is the chief cause of falls and other accidents. One fall can mean lots of discomfort and potentially months of recovery.

- ✓ Get organized. Find a place to put things and put things in their proper place. Things that are put away can not cause accidents.
- ✓ Vacuum the floor. If you can not vacuum your floor, you have dangerous clutter under your feet. Clean it up.

- ✓ Examine your work area. Look for things that you could slip on, bump into, or that otherwise might cause accidents. Eliminate these items to stay safe.

6. POSTURE

Back and shoulder strain are common for anyone who works with machinery or with their hands. We sit in postures that put stress on our backs. We hold our necks hunched over creating neck aches, headaches, and backaches. These may seem normal, but they are actually the result of poor posture and inadequate seating and working furniture.

- ✓ Sit right and stand right to feel right. Whenever you hunch over, you risk back injury or neck injury. Just don't do it.
- ✓ Select a sewing cabinet that places the sewing machine according to your individual needs. The top of your sewing machine should be almost level with your eyes. This allows a gentle not to fully view the sewing area.
- ✓ Use a sewing chair that provides proper back support, seat cushioning, and height that enables you to place your feet squarely on the floor. The combination of right cabinet height and right chair support and height make sewing comfortable and largely stress free. Improper seating and working conditions will produce aches and pains.
- ✓ Sit with your feet squarely on the floor. This enables the furniture to properly support your body. When your feet do not touch the floor, your back attempts to compensate, but result in backache. If your chair is too low and your legs stretch out in front of you possible crossed, your neck and back will remind you

that this arrangement is not enough support. .

- ✓ Right posture produces stress free sewing.

7. EXPOSURE TO HEAT AND LIGHT.

Heat and light are sources of problems for fabric, electronics, and the outsides of your sewing machine. Natural fabrics especially deteriorate when exposed to ultraviolet light and heat. Heat and cold adversely affect electronics and computer systems. Most sewing machines no longer are made of cast iron with black enable paint finishes. Today a special nylon or plastic material covers most sewing machines. These are easy to clean, but will melt when exposed to excessive heat and will fade or yellow when exposed to light.

- ✓ Set up your sewing room with good lighting, but no exposure to the extremes of direct sunlight.
- ✓ Set up your sewing room in a climate controlled space that is maintained at room temperature.
- ✓ Store supplies, fabrics, and sewing machines out of direct sunlight and in a climate controlled space.

What not to do:

- Do not run with scissors or other sharp objects.
- Do not use needles that are dull or have burrs.
- Do not force the fabric through the machine.
- Do not put your fingers or hands behind the sewing machine needle. .

- Do not leave loose needles or pins on the sewing table or cutting table.
- Do not hand scissors or other cutting tools to anyone with the blade toward the receiver.
- Do not cut toward yourself.
- Do not store or lay down scissors open or rotary cutters without the safety on.
- Do not use cutting tools in awkward ways. Do no cut while crossing over hands. Do not reach beyond safe cutting reach.
- Do not breathe chemical sprays. Do not spray toward yourself.
- Do not handle questionable chemical liquids with your bare hands.
- Do not unduly handle materials to which you may be sensitive.
- Do not use equipment with damaged electrical cords.
- Do not leave electrical equipment and pressing equipment plugged in or turned on when not present.
- Do not spray chemicals near heating elements such as irons or presses.
- Do not eat or drink at the sewing machine.
- Do not use cotton covered poly threads or other threads that have excessive lint.

- Do not allow lint and dirt to collect in your machine.
- Do not sit at your sewing machine with your legs dangling or crossed.
- Do not touch hot surfaces of irons or pressing equipment.
- Do not expose fabric and sewing equipment to extremes of heat and moisture.
- Do not expose fabric, sewing supplies, or sewing equipment to direct sunlight.

What to do:

- Only use equipment that is in good working condition.
- Change needles frequently.
- Allow the sewing machine to pull the fabric through the machine while you guide it from in front of the needle.
- Use a soft pin cushion or a magnetic pin cushion to hold loose pins and needles.
- When handing cutting tools to others, always turn the blade back to yourself and hand the handle portion to the other person.
- Close the blades of scissors and set the safety on rotary cutters after use. When not in use, store cutting tools in plain sight and away from the work area to avoid accidental dropping.

- Use cutting tools properly in deliberate careful manner. Cut a comfortable distance, reset, and cut some more. Always cut away from you.
- Spray chemical sprays away from you and use respirators or masks as needed.
- Use protective gloves when handling questionable chemicals.
- Limit exposure to irritating chemicals, allergens, and materials. Prewash fabrics to preshrink and eliminate potential irritants.
- Repair all electrical problems before using equipment.
- Turn off all irons, pressing equipment, and electrical appliances (including sewing machine) when you are finished or leave the room.
- Keep the sewing area free of food, drink, miscellaneous liquids, debris, and other unnecessary items. Avoid clutter.
- Use quality low lint threads.
- Guide fabric to the needle with your left hand smoothing the fabric and your right hand guiding the edge of the fabric. Keep your hands and fingers in front of the needle at all times.
- Frequently clean out the bobbin area of your sewing machine using canned air blown away from you. Maintain clean working equipment.

- Get organized. Vacuum the sewing room floor and keep clutter from accumulating.
- Select sewing table and chair to enable good posture during sewing. Sit with your feet square on the floor, with your back fully supported by the chair.
- Keep fabric, sewing supplies, and sewing equipment in uncluttered, climate controlled areas.
- Avoid exposure to direct sunlight.

Practice good old common sense when it comes to all sewing activities. Maintain a quality work environment void of clutter, well organized, stable room temperature and air quality, comfortable sewing furniture, and appropriate tools. It is always easier to avoid calamity than it is to recover from accidents. Plan ahead. Use good judgment. Use proper techniques for cutting and sewing. Prevent accidents. By doing all of this, sewing is one of the safest hobbies in which you can participate.



CHAPTER SIXTEEN

Your World's Greatest Hobby

Some people enjoy sky diving, scuba diving, or mountain climbing. Others enjoy stock car races, horse races, or NASCAR. Some pass their time watching TV. Some love baseball, basketball, or football. Others may draw, or paint, or mold ceramics. There are a few workaholics that never experience personal satisfaction of creating or sharing a special passion most of us discover in our hobbies.

But Sewing is your passion. You love every minute. When you look at, feel, and caress fabric; you experience a special thrill something like fireworks or goosebumps. You love to imagine new creations, and the experience of finishing your project is like no other.

Sewing relaxes you. It gives you peace and deep inner satisfaction.

The rest of the world may spend its time in hundreds of other ways, but every minute of sewing is like living on a cloud.

You have your own specialization that gives you that added boost, but it is all part of the wonderful world of sewing – Your World's Greatest Hobby.

What makes sewing such a great hobby?

- ✓ This is a hobby you can do.
- ✓ It is easy to learn. Classes are available at amazingly low costs from experts who have a real passion for sewing.
- ✓ There are loads of supports, and opportunities to share your hobby.
- ✓ It is inexpensive as hobbies go. For a few hundred dollars you can do amazing things. For a few thousand you can transform your world.
- ✓ Spending on your hobby will make huge savings over having a professional do the same job.
- ✓ Your hobby builds self confidence.
- ✓ Your hobby boosts your pride in yourself.
- ✓ Your hobby provides relaxing personal satisfaction.
- ✓ Your hobby gives practical solutions to everyday challenges.
- ✓ Your hobby is fun to do and fun to share.

- ✓ Your hobby sets you apart from the crowd, making you truly special.
- ✓ Sewing is the greatest hobby in the world.
- ✓ The more time and resources you invest in your hobby the more pleasure, satisfaction, and profit you gain.

What are the elements of sewing that make this hobby so special?

MY LOVE AFFAIR

One of the highlights that most sewers just love is fabric. There are so many different kinds: natural fabrics like cotton, wool, and silk; man made fibers like rayon, polyester, and a huge array of blended fabrics. There is a fabric for every possible use and most projects may be made with half a dozen different kinds of fabric. The variety and choices are staggering.

When I walk into a fabric store, I am blown away. Over here are gorgeous satins, chiffons, and silks. Over there are rows and rows of prints. There are quilt fabrics, dress fabrics, specialty fabrics, oh, I love it. There is a whole section of upholstery and home décor fabrics. Those paisley prints and that brocade are so beautiful. I get so excited feeling the different textures, gazing on the wonderful colors, and imagining what I could do with that fabric.

Sometimes I feel a little guilty about my love affair with fabric, but who cares. I just love fabric.

Is it the "eye candy" appeal of fabric that seduces me into walking clear across a busy store just to touch a fabric I got a glimpse from the other side of the store?

Is it the urge to feel something very special that draws me to wrap that fabric over my arm?

The thrill is so deep and so stirring, it may seem somehow just a little wicked. Yet, all I am doing is shopping for the right fabric. I may not know what my project is yet, but I just love shopping for that special piece.

When I leave the fabric store, I usually have an arm load of my treasures. "Lord, Forbid, they run a sale too."

If you are like me, you share this love of fabric. Our sewing hobby uses some of the most beautiful things to make our own creations.

Please don't tell my husband about my feelings for fabric.

YES, I CAN

I started sewing by watching my mother when I was eight or nine years old. I always thought it was almost miraculous the way Mom could take a piece of fabric and turn it into a new dress or blouse. I can remember making my own skirt. I was so excited. That thrill has never left. I can go into my sewing room anytime I want to and make some thing brand new and wonderful.

Along the way, there have been a few bumps in the road. In Junior High School, I took Home Economics. (They may call it Life Skills or something else today, or girls may

never even get a sewing class depending on the school.) I thought it would be fabulous, but to my disappointment, my teacher did not actually sew. At least she did not sew like my mom. She said to do things is such dumb ways, I started getting discouraged. The teacher couldn't figure out how I got my projects to come out some much nicer than hers. It did not rest well, but the class was soon over, and Mom still shared my passion.

When I was attending college, I was surprised to discover that I was almost all alone. That is in so far as my passion for sewing. Soon other students would come to me and ask, "Could you please..." My answer was always "Yes, I Can!" I still find it very hard to say that other word – you know that word that starts with an "N" and end with an "Oh".

Over the years, I have discovered that many people who want to learn to sew take make it harder than it should be. In fact, I consider sewing easy to learn and easy to do.

While there are some basics, once you get the hang of it, sewing gets easier and easier. I love doing alterations, because it give me quick satisfaction, but the same skills I use to make alterations easily translate into clothing construction, embellishments, home décor, crafting, quilting, and just about every other part of sewing.

I use to do knitting (I made the proverbial sweater for my then boyfriend in college.). I use to do rug hooking, and several other hand sewing and needlework activities, but about twenty years ago carpel tunnel syndrome struck. Cutting with scissors, turning and twisting those needles, and tugging and pulling just took their tolle on my wrist. For a while I even found it difficult to sew at my sewing machine. Today, I love to see and talk with those who sew and do needle work by hand, but I find it just hurts too much for me.

Fortunately, I can still sew and sew and sew with little or no pain or discomfort. I let my sewing machine do all the work for me. I discovered the rotary cutter which has made cutting a breeze. Although, I still use my thread snips, gingher scissors, and seam ripper occasionally, the rotary cutter and mat have been a blessing. I find now that my wrist does not even bother my sewing most of the time.

Almost daily, customers will come into the store with challenges on one project or another. I get a thrill out of encouraging them. With just a few minutes of assistance, they are on their way confident and excited again about their project.

In my beginning sewing classes, I have discovered two strange attitudes (strange to me). One is the student that comes in with an arrogant, "I already know all there is to know about sewing. Just stick the fabric under the needle and go. That's all there is to it." The other is the student who comes in petrified, "I don't know if I can do this? This is so complicated. I'm all thumbs."

The right attitudes is essential. If you already know all there is to know, why attend class anyway? Just maybe, learning to sew should be approached with an eager open mind ready to explore, learn, and create. If you are afraid, take a deep breath. I assure you, sewing is not as hard as you might think. Just relax, enjoy, and get ready to have fun.

Here is the attitude you must have to learn and enjoy sewing:

1. Yes, You Can! You can do this!
2. Listen, Watch, Copy, and Do.
3. Learning to sew is one of those things that requires Learning by Doing and by Inspiration.
4. Relax and Enjoy.
5. Get Excited About Your Possibilities!

Learning to sew is easy!

There are resources available that make learning quick and easy.

- Many High Schools still teach sewing classes.
- Sewing classes are often available through community programs such as Parks And Recreation, Adult Education, Girl Scouts, 4H, and churches.
- Sewing and Quilting Classes are available through Sewing Machine Stores, Sew And Quilt Stores, Fabric Stores, Quilt Guilds, and the Home Sewing Association.
- Periodically, special sewing event are held offering expert instruction in workshop formats sponsored by local businesses or organizations.
- Libraries, Bookstores, and the Internet offer vast resources to the beginner and expert sewer.
- Volumes of Information is available through magazines, books, and videos.
- Sewing Answers. Com is here for you. We offer a wide range of materials and resources to help make learning to sew easy, fun, and quick.

The most important consideration when attempting to learn anything new, is to find an expert you can work with. Please note there are actually two essentials here: First, find an expert. Second, find someone you can feel comfortable learning from.

What is an expert? In common practice, an expert is anyone who is a distance from you who says they know something or other. What you need is more than that. You need someone who has demonstrated the knowledge and skills you seek. If you want to learn to quilt, find a skilled quilter with a passion for quilting who is able to explain what they do. If you want to learn home decor or clothing construction, find someone who is passionate and skilled in those areas with several years of successfully completed projects that reveal their skills and expertise. If they live in your house, great. My mom was my expert. If they teach in a school, that may be ok too. Just remember, a teacher can really only teach what they know. If they don't know, they can't teach it, and you probably won't learn it.

If you have ever been with someone that makes you feel inadequate, uncomfortable, threatened, or just angry, then you know how important it is to find the right teacher. It is vital that you find someone you can respect, and that makes you feel at ease during the learning process. You may have to actually try a few different teachers to find the right one for you. If, however, you go through a dozen or so expert teachers, and you find that none click with you; you might take a good look in the mirror.

Remember, your attitudes makes a huge difference.

Yes, You Can! Don't let anyone tell you otherwise.

You can do this! You can learn the techniques. You can develop the skills. You can make beautiful things. You can create. You can achieve. You can do it.

Get the right attitude! Find the right teacher. Read, listen, explore, copy success, and create.

Warning! Do not get hung up on perfection. Sewing is a creative art. "Close counts!" Resist those skeptics and critics who only see the flaws. Celebrate every

accomplishment. Gain confidence by enjoying your creations.

SHARING THE PASSION

I suppose there are a few quiet souls who love sewing and produce wonderful creations, without sharing their passion with others. To me, that would be very lonely.

If you are a beginner, I can tell you there is no greater thrill than to walk into a room of adoring fans who come up to you eager for your attention. Yes, they may want that ripped pocket fixed, or that hole in the blue jeans patched, but it still feels soooo good.

After being in the sewing business for a while, I was at the grocery store, and a man approached me that I did not recognize. "Say, aren't you're the Sewing Lady?" A chill went down my spine, and I thought, "Yes, that's me!"

There are many wonderful opportunities today to share your passion with friends who sew as well as with others.

How to find those who share your passion:

1. Ask about clubs, groups, etc. at fabric stores.
2. Look for local guilds or sewing clubs.
3. Call local church for sewing groups.
4. Check out your local sewing machine shop.
5. Attend some classes.
6. DISPLAY YOUR CREATIVE TREASURES.

Sharing is such a blessing. Seeing the creative achievements of others and copying their ideas if fun. Explaining how you did such and so, is exciting. Just remember to share, and avoid dominating.

COST AND RETURN

If you look at the time, money, energy, and other resources you used in your hobby, you may wonder if it is really a good investment.

First, let me say, sewing for me is not an investment. Yes, the hundreds of thousands of dollars I have invested in my sewing businesses are an investment, but sew is not. For me, sewing is like breathing fresh air. I use my diaphragm muscle to pull my chest cavity open and such air into my lungs. I then squeeze my lungs to expel the carbon dioxide, but it is not an investment perse'. It is life. Not sewing would be like choking.

On the other hand, sewing is "just a hobby". There are certain things I need to pursue my hobby. Depending on the kind of sewing I do, the specifics will vary considerably, however, there are costs.

I typically need a sewing machine, fabric, needles, threads, cutting tools, measuring tools, and various notions. These costs of these vary considerably.

It is possible to find a "sewing machine" for under a hundred dollars. It is also possible to spend thousands of dollars on a sewing machine. Generally, the more I invest in quality the easier, smoother, and more dependable my sewing machine will be. Cheap machines are typically noisy, clunky, undependable, and hard to use. When I buy quality, I reap vast benefits and capabilities.

The same thing is true when purchasing fabric, notions, supplies, etc. The quality of goods used impacts the quality of finished product. It is a fact.

As far as hobbies go, sewing is not the cheapest. Collecting bugs, climbing rocks, or fishing might be cheaper.

On the other hand, it is far from the most expensive hobby. Compare it to flying, golf, woodworking, and hundred of other hobbies, and sewing comes off pretty conservative.

Can you imagine paying \$1,000 for an afternoon of sewing? Ask an avid golfer?

Can you imagine a skilled woodworker using old dull rusty worn out tools?

A new sewing machine is a bunch less expensive than a new bass boat, and it comes with a free motor.

What if you calculate all the costs of sewing and maybe even double them; how would sewing stack up?

Fact: Sewing clothing from scratch produces clothes that fit, express the exact style you desire, and use quality fabrics far superior to ready made clothing. Otherwise, it may be slightly cheaper to just go out and buy the cheapest sale ready made item.

Fact: Sewing Alterations enables you to take that discounted readymade item that you got on sale for \$10 and saved \$40 on; and make it fit. Every time I go to Kohls, or one of the other clothing stores, I come home with something from the clearance or damaged bin. It would be worthless, except I sew! In minutes, I transform that discard into a brand new, perfect fit garment. It would cost a bundle to pay someone to fix it.

Fact: Sewing Embellishing gives me the power to take ordinary readymade items and turn them into one of a kind designer piece. A tiny investment produces fabulous returns. It makes me feel fantastic too!

Fact: Sewing Home Décor turns drab surroundings into extraordinary custom furnishings for pennies on the dollar. Instead of \$5,000 draperies, I can sew \$500 ones that are even better. Instead of empty tables I can make \$200 table runners for \$20. What an investment.

Fact: It does not matter what area of sewing you might examine, the return on investment is awesome.

Your World's Greatest Hobby enables you to experience all the thrills of creativity, all the joys of self expression, all the peace and calm, all the grand achievements, and more. While at the same time empowering you to produce a huge return on your investments.

MY HOBBY IS THE GREATEST BECAUSE

- ✓ It is Mine. My Passion. My Expression.
- ✓ It is Easy And Challenging at the same time.
- ✓ I have loads of support, and opportunities to learn, explore, and share my hobby.
- ✓ It is My Best Return On Investment. For a few hundred dollars I can do amazing things. For a few thousand I can transform my world.
- ✓ I save big with every project over having a professional custom job done for me.
- ✓ Your hobby builds self confidence.
- ✓ My sewing hobby boosts my pride in myself.
- ✓ My sewing hobby provides relaxing personal satisfaction.
- ✓ My sewing hobby gives practical solutions to everyday challenges.
- ✓ My hobby is fun to do and fun to share.
- ✓ My hobby sets me apart from the crowd, making me truly special.
- ✓ Sewing is my greatest hobby in the world.

Sewing Is My Passion!

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OF
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The World's Greatest Hobby is the first book in a series of dynamic resource books designed to give you detailed how to explanations, directions, and information on hundreds of questions concerning sewing and quilting. The aim is to provide simple straightforward practical explanations and helpful information that you will find easy to use and understand. We hope you will find the information here to be quickly understood, simple to follow, and easy to use.

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