

# BEADMAKERS' HANDBOOK



**FIRE MOUNTAIN**  
**GEMS™ Beads**  
"Friendly Service" Since 1973

## *A Message,*

*If it wasn't for a wrong assumption on our part, this catalog would never have existed. Customers were coming in our store requesting information about bead stringing. We're delighted to share what we know, but as our customers became more advanced, the questions got harder.*

*"Why don't we research all the tricks of beadstringing and write a little booklet for our customers," we said. Our wrong assumption was that we thought this job might take all day; as it turned out, it took almost six months.*

*We wrote to a large number of bead manufacturers and bead societies requesting information. What we got back could have been independently figured out in about three hours by your average Girl Scout. Where was this advanced information?*

*We hired a professional researcher who we've known for years and who was interested in beads. "Go find out all this beadmaking stuff and come back next week when you're finished." She came back three months later looking three years older. She said the literature on beadstringing is skimpy to nonexistent. Most of what she learned came from professionals who tended to guard their secrets with their lives.*

*When we saw the results of her research we realized that beadstringing is not at all difficult. In fact, it is one of the easiest of the jewelry arts to learn. The problem was an information blackout which prevented thousands of interested craftspeople from getting started in this lucrative profession.*

*This handbook/catalog is the result of our attempt to share the techniques of dozens of professional beadstringers on the most popular beading designs. The results of what can happen are best illustrated by this unusual set of occurrences which happened in our bead showroom.*

*One of our regular customers came in on her lunch hour and brought her friend Linda. Our saleswoman asked Linda if she had made that lovely necklace she was wearing. "Oh, no," Linda replied, "My husband bought it for me on our cruise of the Virgin Islands in a duty-free shop."*

*"The reason I asked," our saleslady told her, "was that we sell all those beads. I thought that you had made the necklace from our beads." Linda became intrigued and asked what it would cost to duplicate the necklace from our beads. It came to just over \$28.00. She said she had paid over \$300.00 for the necklace in the Islands.*

*"Would you show me how to make this necklace?" she asked. About 15 minutes later she had made the duplicate right there on the showcase. Linda was thrilled. She had a friend at work who she knew would pay her \$100.00 for a Necklace like hers.*

*The next day she was back by herself. Other girls at work wanted Linda to make necklaces for them. Linda had lots of questions. Then she bought lots of components.*

*Within three months Linda's life had changed drastically. She had quit her job. She was making necklaces full time and using \$1000 - \$2000 worth of components per week, and she was so enthusiastic she looked as if she were walking on air.*

*Her customers were mostly boutiques in the area and she would give her good customers necklaces on consignment and rotate their stock every few weeks.*





*Her business is still expanding and Linda is looking for a second assistant to help her string.*

*We asked Linda to share the keys to her remarkable success. She said, "There are a number of things that are important. First, develop a personal sense of style; be observant, look at the designs you see around you and remember the ones you like; if you use the best materials in your designs and keep your prices fair, you will have confidence in your product and this will give you credibility. Be a sincere and honest business person and your customers will be back again and again."*

*Linda adds, "I wish I'd discovered this business years ago—I feel free and independent for the first time in my life."*

*Now Linda is unusual. Very few people have ever developed a new business as quickly as she has. But her success is certainly not unique. We have hundreds of customers who make their livings doing nothing but stringing beads. Their methods of marketing are as diverse as the designs they make. Some sell at swap-meets, bazaars, crafts shows and gem shows. Others sell to retailers. Good retailers include any businesses that get lots of walk-in traffic, including hairdressers, dry cleaners, and small markets. Most either supply jewelry stores or have set up their own shops specializing in bead designs and restringing. One boutique owner makes custom designs for his customers to match the dresses they purchase.*

*There is still plenty of room for innovation. New bead designs are being developed daily and new ways of profitably selling these designs are limitless. It seems the total potential for this market hasn't been scratched. Best of all, beads are not a jewelry fad; people have been wearing them for six thousand years and they're not going to stop now.*

*We at Fire Mountain Gems have based our business on helping others become successful in jewelry making. We will continue to work to keep you in touch with the latest information plus the best components at extremely competitive prices. Please let us know how we can be of service to you.*

*We wish to acknowledge the help of the many people who have assisted us in the development of the handbook/catalog including Shirley Hooper of Kuna, ID, who did much of the research; Maura Hyde of Alexandria, VA, who did much of the stringing; Mary Dawson of Woodland Hills, CA, who designed many of the necklaces pictured here; Judy Heron of Woodland Hills, CA, who contributed design and marketing tips; and the Gemological Institute of America who contributed technical assistance.*

*Happy Stringing,*

*Stuart Freedman, President*

# INTRODUCTION

For thousands of years, beads have played an important role in man's culture, as symbols of power, riches, or in rituals and magic. Beads continue to be part of our culture, and their dominant role today is as a fashion accessory. In fact, whether on the beach, in the boardroom or the ballroom, many fashionable ensembles would be considered incomplete without the special necklace and/or bracelet to lend the finishing touch.

However, as popular as these pieces of jewelry are, the 'right' look in design, colour or material may be difficult to find; or, if it is found, the cost may be prohibitive. The purpose of this handbook is to help you learn how to create your own accessories—easily, simply, and professionally.

Though the art of stringing beads is a relatively simple one, it is still slightly more complex than stringing popcorn and cranberries during the Yuletide season! This book, and the instructions and information contained within its pages, will enable you to master those many

details that separate the amateur from the professional. You will learn how to select beads; find which is the best stringing material to use and why; and all about many jeweler's findings such as bead tips and clasps. Also described are some tools and other equipment that will be helpful to have on hand, and some thoughts as to setting up the ideal work environment.

A large number of bead stringing projects are included, from a simple single strand that slips over the head to the more sophisticated techniques, including the very elegant hand-knotted necklace. For each of these projects, a list of materials and tools is provided, and clear step-by-step instructions supported with illustrations to explain each new technique as it is introduced.

As you become familiar with the many techniques that are detailed, you will discover for yourself just how easy it is to create a piece of jewelry that rivals any found in the better jewelry departments. More important, whether your creation is for yourself, as a gift, or to sell to others, it will be unique—your own fashion signature.



Etched carnelian beads. 3100 B.C.

## CHAPTER ONE HISTORY AND ORIGIN OF THE WORD

"Beads are the Adam and Eve of the jewelry family . . ." say the authors of the very comprehensive book, "5000 Years of Gems and Jewelry."

From man's earliest days, the most universal forms of jewelry have been the necklace and the bracelet, and he has used a wide variety of materials in the process—from the primitive use of nuts, shells, berries, teeth and bone, to the sophisticated use of precious jade, rubies and pearls.

Excavations of early cave dwellings, inhabited more than 10,000 years ago, reveal bits and pieces of perforated shells and ivory, indicating that the necklace was part of the Stone Age wardrobe. The diggings of the tombs of ancient Scythia, Egypt, the Orient and the Americas have uncovered beads of hammered gold, beads inlaid with precious metals, the stunning lapis lazuli, and intricately carved jade and carnelian—all designed to signify power, wealth, to bring good luck or to ward off evil spirits. Beads and jewelry have been such an integral part of mankind's history that archeologists have long used these to measure the degree of a nation's civilization.

The use of beads as protection against harm is well documented. Many of the bones and shells found in the remains of the early cave dwellers are covered with thin, decorative lines which suggest that these bones and shells

may have been inscribed with magic symbols. Various cultures have designated stones with more specific powers: agate as a protection against spider bites and thunderstorms; green jasper could bring rain; lapis lazuli enabled the wearer to be free from the attacks of serpents; amber was a protection against demons; and beads formed into earrings were felt to ward off diseases of the eye.

The Egyptian word for beads was 'sha-sha' and the syllable 'sha' was also the word for luck. The belief that beads bring luck persists today, and an example of this can be found in Athens. In her 1937 book, "First Person Plural," Angna Enters describes this age-old belief in the amusing combination of the automobile and the amulet. After remarking on the poor condition of the unpaved streets which made "uncomfortable and dusty transit for motorists," Miss Enters continues: ". . . that is,



Stratified eye bead.  
Italy, 1300 B.C.

difficult for any motorists save Athenian taxi drivers, who need have no fears of accident, so well are they guarded with amulets and blue beads which hang over windshields. There are even bracelets on steering wheels and radiator caps. The passenger's compartment, of course, is guarded by his own amulets. Thus the taxi drivers only need turn on the motor, close their eyes, and their patron saint takes care of the rest."

Although history records that man has long used beads as a form of power against evil, or to ensure good luck, beads have also held power over man. In their book, "5000 Years of Gems and Jewelry," the authors reveal this power.

"There is a story of a senator, Nonius by name, who possessed an opal the size of a hazel-nut, and of such surpassing beauty that at the sight of it, Mark Antony was overwhelmed by so inordinate a desire to own it that no sense of justice could restrain him. His heart was set—the story goes—on giving that gem to Cleopatra. He decreed that Nonius must either hand it over to him, Mark Antony, or suffer banishment from Rome. Now to be exiled from his beloved city was a peculiarly bitter fate for any Roman, but it was choice of Rome or the opal. Nonius was forced to choose between them, and he did. Nonius took his opal and left Rome forever."

Beads have also played a significant role in the history of the United States. From the journals of one of the early colonists is a notation that an Indian chief was observed to be wearing earrings of strung pearls, and another entry states that a gift of strung pearls was given by the Indians to John Smith. Students of U.S. history learned early on that Manhattan Island was obtained for the equivalent of \$24 in beads and trinkets—a paltry sum by any standard! As it so happens, beads were also instrumental in saving some early colonists from death by starvation during their first winter on the new continent. It seems that despite all manner of entreaties, a certain Indian chief refused to exchange his corn for the trinkets being offered by the colonists. However,

when the chief was shown some blue beads that had been brought over and then told that only royalty may wear them, he relented and a deal was struck. The colonists received many precious bushels of corn, and the chief had a royal decoration!

Beads have been used as a monetary exchange. Long before currency, as we know it, came into being, man's power was determined by his wealth—and wealth was measured in terms of possessions (of course, this holds still true today). But in earlier times, people acquired possessions and goods through barter—trading objects for other objects of equal value. One of the generally accepted standards of possessions for trade was cattle. Cattle were most accommodating, as possessions go, for they not only conveniently increased their numbers, but provided nourishment and protection from the elements with their meat and hides. However, they did have to be maintained and their worth would be eliminated or decreased if a drought or some other disaster should strike. Additionally, getting large numbers of cattle across long distances in order to seal a bargain could prove rather inconvenient.

Somewhere along the line, some enterprising person hit upon the idea of using precious stones and metals as objects for trade. These had the advantage of being quite valuable, didn't particularly require upkeep, and were easily transported. And so, perhaps the most convenient and welcome of all substitutes for currency became the humble bead.



### Origin and Definition of the Word

The actual beginnings of the word are a bit shrouded. Most sources say that it is from the Middle English word 'bede' meaning 'to pray.' The word can actually be traced to the Old Saxon language, which pre-dates Middle English by nearly one thousand years. We know that the Saxons were in England for hundreds of years before the Romans arrived, and that the English language has very strong Germanic roots.

Sometime during the late 6th century, Roman missionaries brought Christianity to England, and the practice of saying many prayers during worship. To keep track of the number of prayers that had been said, a long string with many knots was devised, with each knot representing a prayer. Having learned the word 'bede' from the Saxons, the English applied the word to the knots that were being used as counters. In time, the knots were replaced with beads, possibly as a result of the lower classes attempting to keep pace, in their own fashion, with the wealth displayed by the ruling classes. These beads came to be known as 'telling beads,' from the 'telling of prayers.'

The religious significance attached to beads is illustrated in the following words and phrases:

ALMS-HOUSE (originally bede-house, or bead-house)—a refuge where people could stay who were too poor to take

care of themselves. In return for these alms (deeds of mercy), the inmates of these sanctuaries were expected to offer daily prayers for their benefactor(s).

BEADS-WOMAN—a woman who prayed for her benefactor, and BEADS-WOMEN came to refer to the members of a convent.

BEADSMAN—a licensed beggar in Scotland.

BEAD TREE—native of East Indies, this tree grows to about twenty feet, and its nuts are used in Spain and in Portugal to make rosary beads, the rosary being a string of beads that is used by many religious groups to keep track of the prayers that have been said.

BEAD-ROLL—originally this meant to identify a list of persons who were to be specially prayed for, and later came to mean a series of items, or a long list of names, such as a pedigree or catalogue.

There was even the expression "to pray without one's beads," which was a way of saying that the person was out of his reckoning (his ability to measure, estimate or judge) and, therefore, his judgement was impaired!

In time the word came to apply to anything that resembled the small, spherical objects that were used in prayer. So, as you have read, the bead has been part of our lifestyle and culture from our first stumbling footsteps. Now, let's get on with helping you capture your own piece of the sun!

# CHAPTER TWO

## THE BEAD AND ITS MANY FORMS



Although the word 'bead' was originally intended to describe the small, globular bodies that were used for the counting of prayers, today's definition is nowhere near as restrictive. As applied to jewelry, a bead is any small, perforated object, spherical or otherwise, that is used for stringing or for sewing onto fabric.

Beads come in all manner of materials, shapes, sizes and colours. The most common materials are gemstones, glass, plastic, metal and wood; the shapes can be round, oval, square, nugget or cylindrical. The textures vary from smooth to faceted, fluted, carved or inlaid with other materials. Colours range from the snowiest white to the deepest jet black, with all of the offerings of the rainbow in between.

Natural and manmade gemstones, as well as metal beads, are the most popular beads for stringing, therefore some discussion is in order as to the sizes, colours and styles available, and also some help in determining just how many will be required for a given project.

### Gemstones

Gemstones are usually available on temporarily strung strands, although the specialty items, such as cloisonne, are generally sold in small quantities or singly. The quality of the gemstones depends upon the material composition, as well as the source (origin) of the bead. When selecting your beads, ensure that all of the beads of the same type and size are uniform in shape and size, that the boreholes have been evenly drilled, and that the beads themselves are free from structural flaws, such as chips or cracks.

The range of colours available is staggering, and the following table lists easily available gemstones.

**TABLE I. Gemstones and Their Colors**

GEMSTONE	COLOR	
Abalone	Iridescent colors	Hematite . . . . . Metallic, dark silvery
Amethyst	Lavender	Howlite . . . . . White with black veining
Black jade	Black-dyed serpentine	Jade . . . . . Various colours, usually green tones
Black onyx	Black agate	Lapis lazuli . . . . . Blue, some pyrite or white calcite (usually dyed)
Blue lace agate	Banded Light blue	Malachite . . . . . Green, stripes and eyes
Blue onyx	Med. blue-dyed agate	Mother of pearl . . . . . Creamy white pearl
Botswana agate	Pink, grey and lavenders	Opal . . . . . Glassy, translucent with play of color
Carnelian	Orange-red, translucent	Red jasper . . . . . Brick red
Citrine	Light to golden yellow	Rhodonite . . . . . Pink with black patterns
Coral	Red, white, pink or orange	Rose quartz . . . . . Translucent pink
Crystal	White, clear or frosted	Sodalite . . . . . Deep blue, occasional white calcite
Fossil	Grey/white, natural or dyed any color	Striped onyx . . . . . Green, cream, tan
Garnet	Wine reds	Tigereye . . . . . Brown, gold bands
Goldstone	Brown with metallic flecks	Tourmaline . . . . . Pink or green
Green moss agate	Translucent background with moss-like inclusions	Turquoise . . . . . Blue, some with black matrix
		Unakite . . . . . Olive-green and subtle pink
		White onyx . . . . . Pure white

For those special occasions, how about a birthstone?

**TABLE II. Birthstones**

January . . . . . Garnet	July . . . . . Ruby
February . . . . . Amethyst	August . . . . . Peridot or Sardonyx
March . . . . . Aquamarine or bloodstone	September . . . . . Sapphire
April . . . . . Diamond, or white spinel, frosted crystal	October . . . . . Opal or Tourmaline
May . . . . . Emerald	November . . . . . Topaz
June . . . . . Pearl, moonstone or alexandrite	December . . . . . Lapis or Turquoise

### How Many Beads Do You Need?

Round beads are available in many sizes, and are measured according to the bead's diameter in millimeters (mm). As mentioned earlier, beads are usually sold pre-strung, and the typical length of the strand will be approximately 16 inches. Sometimes the strand may be longer, depending on the beads and their origin.

The average 16" strand will contain the following number of beads:

- 4 mm = approximately 100
- 5 mm = approximately 80
- 6 mm = approximately 67
- 7 mm = approximately 57
- 8 mm = approximately 50

Because you may wish to include a mixture of sizes in the necklace or bracelet, it is important to know how to determine just how many beads of a given size will be required.

It is fairly simple to figure the number of beads needed for a length of finished strand, and the easiest method is as follows:

1. One inch = 25.4 mm
2. Multiply 25.4 by the number of inches of beads (excluding clasp) in the finished strand. For example, the strand will be 16".  $16" \times 25.4 \text{ mm} = 406.4 \text{ mm}$
3. Divide the total number of millimeters in the final length (in this case, 406.4 mm), by the diameter of the bead to be used (let's use 4 mm), and the result will be the number of beads. For example:  $406.4 \text{ mm} (16") \text{ divided by } 4 \text{ mm} = 101.6 \text{ beads}$

This formula, while quite easy, can be tiresome to work out for each and every size that you may desire to use. The table on the following page provides a quick guide for the number of beads of a given size that are contained in a certain length of strand. The figures have been rounded off for the 16" through 32" lengths, so that instead of 101.6 4 mm beads for the finished 16" strand, the figure is shown as 102 beads.

It is a good idea to have a few more beads than you think you really need. Although care is taken that the beads are of good quality and uniform, there may be small cracks or chips which you may discover that prevent the beads from being used in that design. Leftover beads can always be used in earrings or perhaps a charming kaleidoscope design. If imperfect beads must be utilized to complete your project, try to locate them near the clasp, which is often out of sight when the necklace is worn.

Remember, when computing the length of the finished strand, to provide for any findings such as clasps that will be included in the design; these will increase the length from 1/2" to as much as 1 1/2" depending upon your choices.

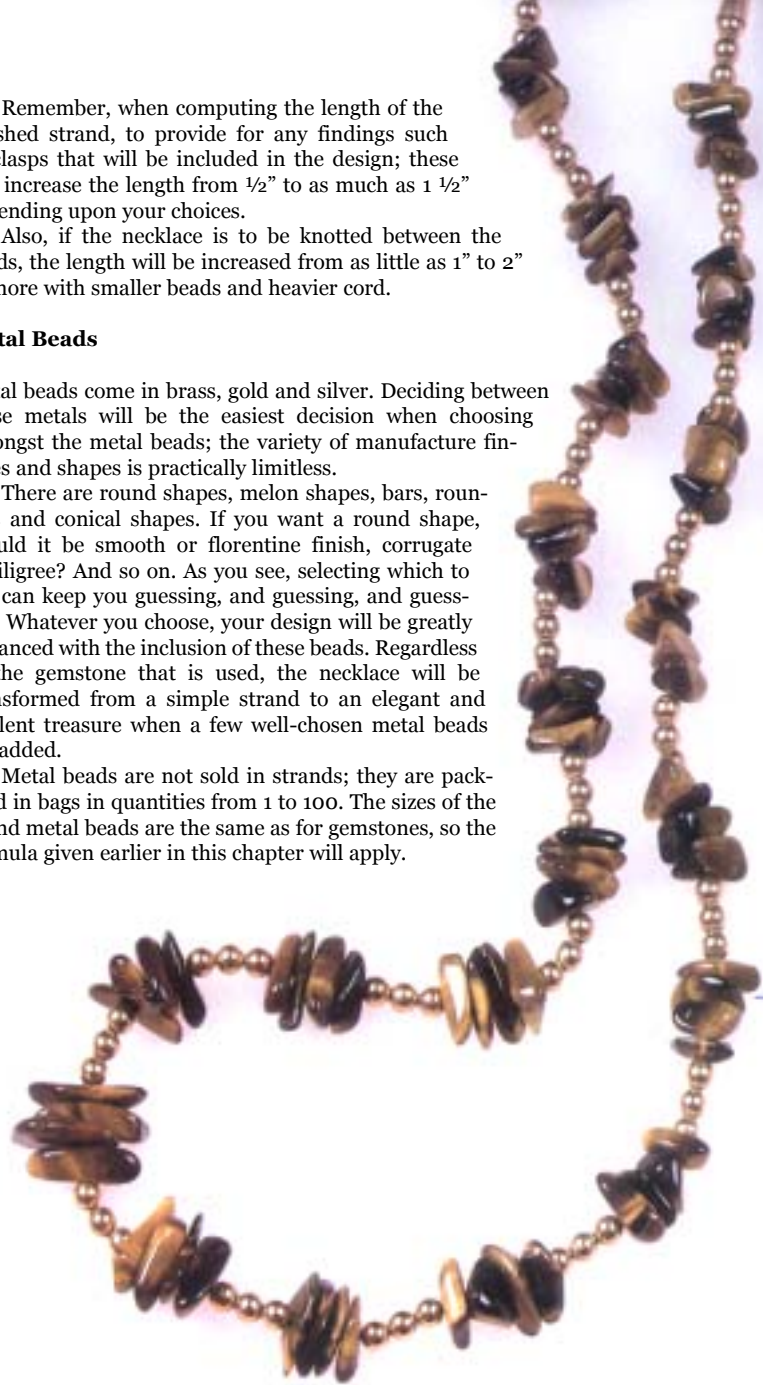
Also, if the necklace is to be knotted between the beads, the length will be increased from as little as 1" to 2" or more with smaller beads and heavier cord.

### Metal Beads

Metal beads come in brass, gold and silver. Deciding between these metals will be the easiest decision when choosing amongst the metal beads; the variety of manufacture finishes and shapes is practically limitless.

There are round shapes, melon shapes, bars, rounds and conical shapes. If you want a round shape, should it be smooth or florentine finish, corrugate or filigree? And so on. As you see, selecting which to use can keep you guessing, and guessing, and guessing! Whatever you choose, your design will be greatly enhanced with the inclusion of these beads. Regardless of the gemstone that is used, the necklace will be transformed from a simple strand to an elegant and opulent treasure when a few well-chosen metal beads are added.

Metal beads are not sold in strands; they are packaged in bags in quantities from 1 to 100. The sizes of the round metal beads are the same as for gemstones, so the formula given earlier in this chapter will apply.



**TABLE III.** Approximate Number of Beads for Various Lengths

Bead Size (mm)	Length of Strand (excluding clasp)						
	1"	4"	16"	20"	24"	28"	32"
3	8.46	33.8	136	170	204	237	271
4	6.35	25.4	102	127	153	178	204
5	5.08	20.32	82	102	125	143	164
6	4.23	16.9	68	84	101	118	136
7	3.62	14.4	58	70	86	101	116
8	3.17	12.68	51	64	76	89	102
10	2.54	10.16	41	51	61	71	81
12	2.11	8.44	34	42	51	59	68
14	1.81	7.24	29	36	43	50	58
16	1.58	6.32	25	32	38	44	51
18	1.41	5.64	23	28	34	39	45

# CHAPTER THREE

## THREAD, FINDINGS AND EQUIPMENT

While beads are the main ingredients of the necklace or bracelet, other materials, such as thread and clasps are very important; additionally, there are a variety of tools that you will find extremely helpful, and good working environment is essential. This chapter will describe the different threading materials that can be used; some pre-fabricated items that will provide the professional touch and others that will make jewelry more comfortable to wear, and easy to put on and take off. It will also cover equipment that will make stringing easier; and finally, some thoughts regarding the work area.

### Threading Materials

The selection of thread for stringing is nearly as varied as the beads themselves, and comes in a wide assortment of materials, weights and thicknesses. Stringing cord is manufactured with a very tight twist that provides the material with surprising strength and durability, and is sometimes coated for additional protection. While it is possible this type of thread is designed for stitching through fabric, and could not bear the heavy weight of the beads; also, it would be cut through very quickly against the edges of the holes in the beads.

Stringing thread can be obtained on cards with needles attached, or on spools. The thread on cards ranges through all of the commonly used materials, weights and colours, and are approximately 75" in length, sufficient for a number of necklaces or bracelets, depending on the length of the strands and whether or not the thread is doubled. Alternatively, you can purchase thread by the spool and separate packets of needles. This approach is the more economical when large quantities are to be strung.

The most important qualities to look for when selecting thread are that the thread will pass through the smallest borehole of the beads, and

that it is strong enough to support the weight of the finished strand. The needles designed to be used in the stringing of beads are very different from those used for home sewing. A stringing needle is made from very thin wire that enables the needle to pass through very small holes, and it is flexible enough to pass between beads.

The following tables describe which stringing material is best used for various beads, and the types, weights and colors of threads that are commonly available.

### Findings

The term 'findings' is used throughout the jewelry industry to collectively describe a variety of prefabricated items such as jump rings, bead tips, French bouillon, and clasps. These items are useful and necessary for the ease and comfort of the wearer in putting on and removing, they provide the means of connecting strands, and they add a touch of quality to your design. Chapter Four provides instructions in the use of the most common findings.

### Bead Tips

Also called 'endings' bead tips are used at the end of a strand to conceal a knot, and to connect the strand to the clasp. They are available in small and large sizes; the size that is to be used is determined by the size of the knot that is to be concealed.

### Bell Caps

These look just like small bells, with a loop at the top, and they are frequently in a delicate filagree design. Bell caps are commonly used when a fringe of beads, such as a tassel, is incorporated into the design, and the cap is an attractive way to collect and to conceal the ends of the fringe that is being attached.

### French Bouillon

Bouillon (or wire) is a very thin wire that has been tightly coiled so that it can be threaded (similar to stringing a bead), and is generally used as a connector, either between groups of beads, or between the strand and the clasp. Bouillon is made of fine silver wire that has been copper plated and dipped in gold. It is then coiled thousands of times into a hollow flexible tubing. It is available in different weights, and is frequently sold by the yard, although shorter lengths are available.

Bouillon provides a neat, professional finish, and because it does not tarnish, this wire is preferred by many professionals.

### Head Pins

The head pin is a length of wire with a flat head at one end. It is used to string a bead, or several beads, then connect to the strand by making a loop at the open end.

**TABLE IV. Applications of Stringing Material**

Pearls	<b>Silk thread</b>	Ropes or Woven Necklaces	<b>Nylon</b>
Beads with smooth drillholes (amber, coral, etc.)	<b>Silk, polyester or nylon</b>	*This is a smooth woven type of chain that is flexible, but yet will resist cutting or breaking, and is used to string heavy crystal and metal beads. The sharp edges and heavy weight of these types of beads will cut regular threading cord.	
Beads with abrasive drillholes	<b>Polyester or nylon</b>		
Beads that are metal, large or have large drillholes	<b>Tiger Tail or foxtail*</b>		

**TABLE V. Types and Sizes of Beading Thread**

SILK		Japanese Sizing
Silk – Japanese (thickest to finest)		
	International Sizing	
Very thick	..... 8	..... 17
.....	.....	..... 16
Slightly thick	.....	..... 15
.....	.....	..... 13
Medium	.....	..... 12
.....	..... 15	..... 10
Thin	..... 20	
Tiny or for leader	..... 50	
Silk – American (thickest to thinnest)		
Extremely thick	..... FF and FFF	Colored American Silk
.....	..... F	Thickest to thinnest: FFF, FF, F, E only
Thick	..... E	Silk on cards (white or colored)
.....	..... D	Thickest to thinnest: 12, 10, 8, 6, 5, 4, 3
Medium	..... C	
.....	..... B	
Thin	..... A	
.....	..... O	
.....	..... OO	
Tiny or for leader	..... OO	
<b>SYNTHETICS</b>		
Polyester – Japanese		Nylon (American – white on spools, waxed)
Use the same international sizing as Japanese silk (above)		Thickest to thinnest: BC3 (heavy), BC2 (medium), C1 (thin)
Nylon (American, German – White and colored) Thickest to thinnest: 8, 6, 5, 4, 3, 2, 1 1/2, 1		Nylon (American, German white and coloured, on spools, unwaxed) Use the same sizing as American silk (above)



## Jump Rings

Jump rings serve as connectors either between beads alone, or as a link between the bead tip and the clasp. The jump ring is simply a small circle of wire with a slit which allows it to be opened for connecting. They come in different sizes, depending on the application.

## Clasps

Clasps do just that—clasp ends of strands together. As with the beads they are connecting, clasps come in a wide variety of sizes, and styles. Some clasps connect both ends of a single strand, some connect several strands individually, while others can accommodate a wide rope of several strands together. Generally, the clasp has one or more small loops on either side for attaching to a single strand per loop. Clasps can be simple or very ornate, all metal or covered with stones. Some clasps are made so that they are not seen as a clasp, but as part of the overall design.

## TOOLS AND EQUIPMENT

Although it is certainly possible for you to make a necklace or bracelet using only the thread and needle (and your fingers, of course), there are tools and equipment that have been specially designed for use in bead stringing, and these items definitely make the process easier, more efficient, and much more comfortable.

### Awl

An awl is shaped very much like a darning needle (in fact, you could use that as well), and is used to help slide a knot into place, down into the cup of a bead tip or between two beads. It is very difficult to coax a knot to fit snugly into position, and without the aid of the awl, darning needle or pair of tweezers, the task can well be nigh impossible.

### Pliers

A pair of pliers is a must for closing bead tips, opening and closing jump rings and it can also help tighten knots. Chain nose pliers are the most practical kind to use, because the outside of the nose is rounded, while the inside edge is flat for gripping. The tips of the pliers should be long and narrow.

### Ruler

A twenty-four inch ruler, marked in millimeters as well, will be necessary to keep track of the length of the strand on which you are working.

### Scissors

Scissors are another must in your jewelry-making tool kit, after all, you will be working with thread and that requires snipping off of ends. The best kind to get are ones that are not too large, and they must be very, very sharp. Dull blades have a tendency to cause the thread to ravel when it is cut, and ravelled ends are a nuisance to deal with when it is necessary to rethread a needle, or even in tying knots.

### Tweezers

Tweezers are handy for picking up small beads, grabbing the ends of the needles when pulling through beads, and especially nice for tying knots. The kind of tweezers you will want have long, tapering ends with care-

fully finished points and feather light tension. They are actually better to use when holding and tying knots than the awl (and have a wide range of applications, as well).

### Glue

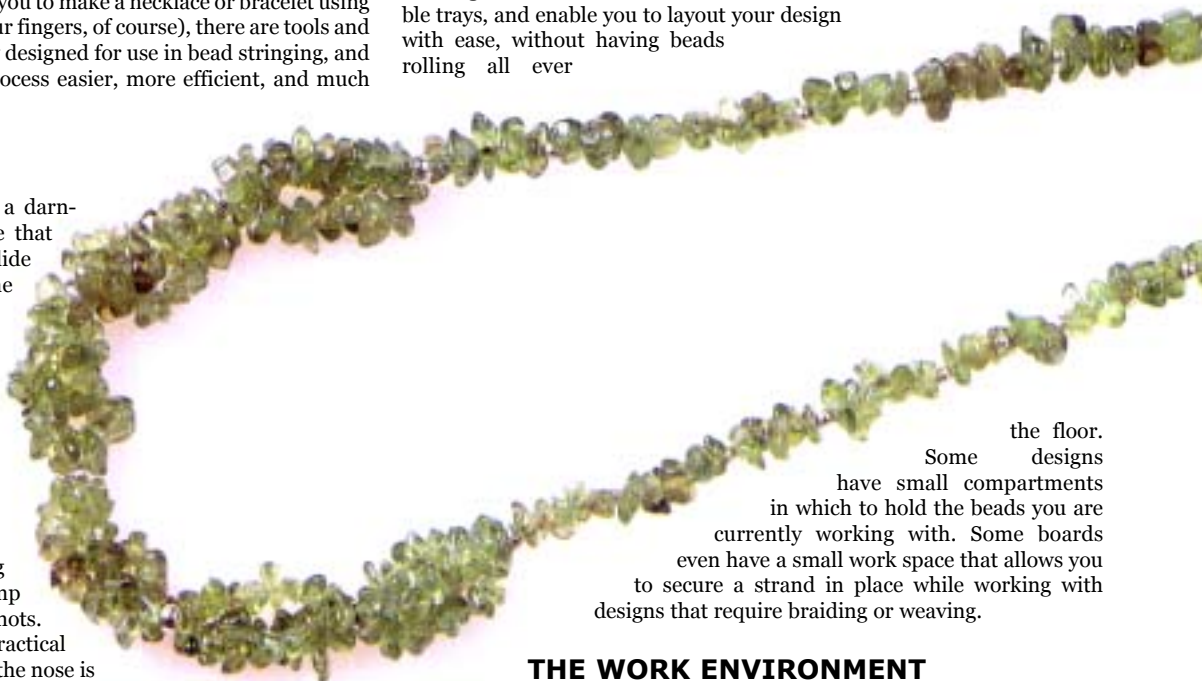
You will want a fast-drying type of cement that the jewelers use. The glue is used on knots and for strengthening jump rings.

### Magnifiers

Your vision may be 20-20, but your eyes could become tired when working for a period of time with small beads and close designs. A magnifier that fits on the head, and is adjustable, so that your hands are free for working is perfect.

### Beading Board

Beading boards are a boon for the beader! These resemble trays, and enable you to layout your design with ease, without having beads rolling all over



the floor. Some designs have small compartments in which to hold the beads you are currently working with. Some boards even have a small work space that allows you to secure a strand in place while working with designs that require braiding or weaving.

## THE WORK ENVIRONMENT

The importance of a good working environment cannot be stressed too much—the successful completion of a project, and your comfort, depend on how well you have selected your beading niche.

The ideal space will be well-lit, contain a sizeable work surface to provide enough room for all the beading materials and equipment, and it will be located in such a manner as to remain undisturbed when you are called away.

Beads bounce, roll and slither—therefore your work surface should definitely be of a non-slick variety. Felt, velvet, a scrap of smooth carpeting, a turkish towel—any of these would be suitable and will aid in preventing any untimely bead escapes, resulting in frustrating searches on hands and knees!

The overall size of the work area is important too. It is amazing how much room is required for the containers of beads, assorted threading materials and supplies, in addition to pliers, tweezers and scissors. So give yourself plenty of elbow-room. Literally.

# CHAPTER FOUR

## THOSE SMALL DETAILS

Okay, you've got the beads and all of the necessary materials and tools, and now you're ready to plunge right in! Before you do, there are still a few more things that you should be aware of. The real fun in stringing beads undoubtedly comes from the arranging of beads to produce a particular effect; however, it will be the small details that separate the amateur from the professional. You will need to know how to work with thread and the various findings that are part of the overall pattern. This chapter provides information and some basic techniques that will reflect the finishing touches found only in quality workmanship. Who knows, your design may become someone's heirloom!

### Thread

There is more to choosing the right thread than merely selecting the proper material, and thickness, and color. As mentioned in the last chapter, the two most important points to remember about thread are: 1) the thread must pass through the smallest hole in the beads being used; and 2) the thread must be able to support the weight of the combined beads. Yes, use the table given in Chapter 3 as a guideline but do bear the following in mind to avoid any disappointing surprises.

Many, if not most, of the stone beads that you purchase will have been temporarily strung on some type of cord. Simply because the beads are already strung on a cord that appears to be thicker than the thread you intend to use, does not mean that the boreholes will easily accept your new thread! Now that just doesn't make much sense, does it? Believe it. A good example of this are some of the smaller stone beads, say 3 mm and 4 mm. Unfortunately, the size of the boreholes will not always be the same, and some holes may be so small that a #1 thread and needle can barely pass through, while another bead will accept a #2 thread with ease. When the size of the hole is too snug, the thread may begin to fray and possibly break during the stringing process as a result of the constant rubbing and gradual wearing down. If it doesn't break now, it may be so weakened that it breaks at a later (and much more inconvenient) time, due to the weight of the beads.

Another point to remember is that your design may require passing the thread through a bead twice. If the thread fits snugly on the first go 'round, it may be too difficult to get that needle and thread through a second time. To avoid this happening, it is a good idea to first string an assortment of the beads you will be using. This may seem to be a tedious waste of time, but it will save you time and aggravation in the long run.

Professional bead makers use the largest thread, (or multiple threads) which will pass snugly thru the smallest borehole of the strand without fraying, consider that you may have to pass eight strands of stringing thread at once. The use of beeswax on the thread before stringing helps to eliminate friction, and lessens the chance of the thread fraying or cutting.

Finally, if you are working on a design that includes knots, use a thread or threads that is close to the size of the borehole (but keeping the above cautions in mind). The reason for this is that when the knot is made, it should be larger than the hole to prevent the knot from slipping back inside of the bead.

### Need More Thread?

It is always a good idea to start a project with enough thread to finish. Sometimes, however, it may be necessary to add thread in order to continue. Depending on the design and the beads being used, adding thread may be the solution. If the design incorporates visible knots, or if the beads have large boreholes, you should be able to add more thread.

To join thread to a strand that contains knots, go back 3 beads from where you intend to join the thread. Insert new thread through a bead, then make a knot between the third and the second bead, using the old thread with the new, and tie as though tying string on a package. Go through another bead and make another knot. Secure the knots with a drop of thin glue. The new knots will be hidden with the old, and you can continue in your design.

If there are no knots, thread can be connected if there are beads with

holes large enough to conceal the knots that will be needed to join the two threads. Simply go about 3 beads from where the joining is to be, make a knot (again using the old and new threads as one knot), and slip the needle through the next bead to make still another knot. Dot the knots with glue, then pull the strand gently to cause the knots to be pulled inside of the beads. However, this could be a bit tricky if the holes are snug, or if the glue has dried. Use the awl to push the knot inside, if need be.

### Choosing Your Thread

The type of thread used is many times up to the personal preference of the beadmaker, (remember, that some beads may be passed thru more than once). Nylon thread is more resistant to fraying than silk thread, but the nylon tends to stretch. Therefore, tie off the nylon under considerably more tension you would use with silk. Silk is used when you wish to knot between each bead, since it is more "slippery," and makes better and easier knots. When stringing beads which have sharp edges that are likely to fray or cut your thread, consider using stringing wire instead of thread. This material is thin woven stainless steel with a nylon coating. Stringing wire requires no needle but you must take precautions against "kinking" the wire, since such kinks are very difficult to get out.

Stringing wire does not knot well so the strands must be terminated with crimps. These crimps are soft metal tubes that come in silver and gold color. They are squashed with pliers over the stringing wire as shown below, to tie it off. Stringing wire comes in many weights. Eight lb. test is good for most necklaces.

To tie off, bring the stringing wire first thru the crimp, then thru the clasp, then back thru the crimp. Remove excess slack from the stringing wire, then smash the crimp flat using any pointed, flat pliers. Cut off excess stringing wire with scissors or nippers.

### Using Bead Tips

The bead tip is used at both ends of a strand, and it connects to a jump ring which in turn connects to a clasp, or the bead tip may connect directly to a clasp. The bead tip is designed with a small 'cup' which conceals the knot in the thread, and the size of the bead tip to use will depend upon the size of the knot that is to be made. Bead tips are usually put on the strand at the same time the beads are strung.

The bead tip goes on first, before the first bead. Enter the bead tip from the top down, going into and toward the bottom of the cup (see figure at right), leaving enough thread at the end so that a knot can be easily made (about 4"). Tie the thread into one or two good strong knots, depending on the size of the thread, and the depth of the cup. Snip off the loose end of the thread close to the knot, and apply a small drop of glue directly onto the knot. Slide the bead tip firmly against the knot making sure that the knot is now fully concealed.

The other bead tip goes on after all the beads have been strung, but this may be a bit awkward. To avoid creating a gap in the thread between the bead tip and the last bead, it is vital that good tension is maintained. This is done by holding the bead tip firmly against the last bead with the fingers of one hand, while making sure that none of the other beads in the strand have any gaps or spaces. Now, with the other hand, make an overhand knot and slide into place, using the first fingers of both hands to guide the knot, taking care that it doesn't tighten before it is in place. The problem will be that the beads may be awkward to handle in this fashion, so you may want to make a knot next to the last bead in the strand, BEFORE attempting to deal with the bead tip. Of course, the borehole of that last bead had better be small enough so that the knot doesn't slip inside, which would defeat the purpose. See the knotting procedure described in the next paragraph for other techniques for sliding knots into place.

### The All Important Knot

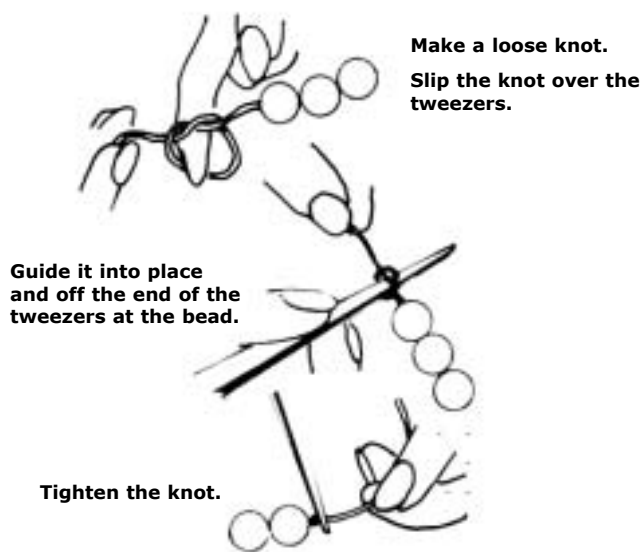
To make a knot immediately next to a bead, first make a loose overhand knot in the thread, then slide it into place using an awl or a pair of tweezers

to guide the knot and hold it in place while you tighten the knot gradually. **DO NOT LET THE KNOT TIGHTEN BEFORE REACHING THE LAST BEAD**, if it does, it will be impossible to untie, and you may wind up having to redo the strand.

When the knot is near the bead, use the tweezers, or a pair of pliers, to grasp the cord near the knot and push gently, but firmly, against the knot to tighten it securely.

Now put on the other bead tip. This time the thread is passed through from the bottom of the cup (as shown to the left), then snip off all but about 6" of strand. Keep the bead tip close to the last bead in the strand (or to the knot, if you've made one). Make a knot and slide it into place in the bottom of the cup, using the tweezers to guide and hold the knot as shown previously.

When using tweezers to help locate the knot, first tie a loose knot, put the tweezers thru the knot and grasp the thread with the fine point of the tweezers, at the place where you want to locate the tightened knot. Tighten the knot gradually, as you slip the knot down the tapering arms of the tweezers. Finally, slip the knot past the end of the tweezers onto the thread



(see Chapter 10 for a more detailed explanation). Before attempting this on your necklace, practice it a few times on scrap thread. Once the knot is in place, use the tweezers or pliers to grasp the cord near the knot and tighten the knot securely. Snip off the loose end of the thread close to the knot, and apply a drop of glue onto the knot.

The bead tip may now be connected to the jump ring or to the clasp, whichever you prefer, using chain nose or similar pliers.

### Jump Rings

Because you will want to open, then close the Jump ring, it is essential that the ring be properly opened. The jump ring should never be pulled apart in opposing directions, as this will pull the ring out of shape, making it very difficult to close it properly.

To open a jump ring, hold one side of the ring with pliers, then gently move the other side of the ring sideways. Use a slight twisting motion. To close the ring, reverse the process, insuring that the ends meet close to each other.

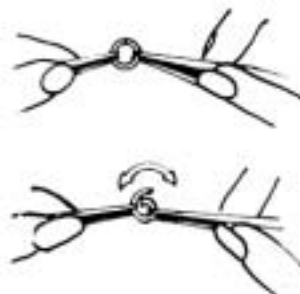
To strengthen a jump ring once it is in its permanent position, apply a small drop of glue onto the slit, thereby creating a bond.

### French Bouillon

Once you have become familiar with French bouillon (or wire), you may feel that it is so practical and useful that you will consider it a must item in your beading supplies. French wire can be used in place of a bead tip to be connected directly to the clasp or connecting ring. Alternatively, it can be used as a terminator at the end of a length of bead fringe or tassel; when used in this manner, the wire may appear to be a small gold bead.

When French wire is applied at the ends of a strand, it is easier to put it on after all of the beads have been strung. In the meantime, you don't want the beads rolling about, which they will if there is nothing to stop them, so tie a loose knot through the first bead in your strand, and leave about 6" of thread hanging free.

Once the strand has been threaded, untie the last bead and thread the loose end with a needle. Cut a length of French wire about 1/2" to 3/4". This may seem a bit long, but it really isn't, because once the wire has been formed into a loop and tightened, the coils will compress considerably.



Thread on the French wire, and gently slide the wire down the needle into position against the end bead. Care is necessary here, for if the coils become stretched, the wire may have to be replaced. As you slide the wire into place, use the tips of your fingers or fingernails against the edge of the coil to keep the coil together. Once the wire is in place, pass your needle thru the attachment loop on the end of your clasp. Pull this loop gently over the length of French wire, then pass the needle down through the end bead, pulling the thread just tight enough to form a loop in the coil. This loop will not slip inside of the bead if the proper thickness of wire has been chosen.

Once you have a good tight loop, make a knot between the first and second bead, using the original thread and the loose strand at the end together. Now go through the next bead and tie another knot (between 2nd and 3rd beads). Go through one more bead to conceal the tail of the thread, and cut the thread close to the edge of the bead. Apply a drop of glue to each of the knots just made to secure them.

When French wire is used as a terminator on a length of fringe or tassel, the effect will be similar to that of a small gold bead. Consequently, you will use a much shorter length of wire, no more than 1/4", and perhaps less, depending on the thickness of the wire and on how small you want the 'gold bead' to be. The procedure is the same as the above.

# CHAPTER FIVE

## THE SINGLE STRAND

The single strand is a classic in its simplicity—regardless of the color, number and kind of beads, or its length.

The four projects in this chapter will show how to:

- determine the number of beads required
- finish the necklace using a simple knot
- finish the necklace using bead tips, jump rings and clasp
- layout a design

### 5.1 Necklace of uniform-size beads, finished with knot – 30"



This is a square knot, made up of two simple knots each called a "half-hitch." Make a half-hitch with one thread, then a half-hitch with the other thread.

#### Alternate method of Tying-Off Continuous Strand



1. String entire strand.



2. Run one strand thru 3 additional beads.



3. Pull taut and tie a double half-hitch onto each strand, trim and glue both knots.

#### Materials:

95, 8 mm carnelian beads / 1 card #3 nylon cord, with attached needle / glue / scissors



- Multiply 25.4 mm (number of millimeters in an inch) by 30, the desired length of finished strand, to obtain the length in millimeters, which is 762 mm. Divide this figure by 8, the size of the beads in millimeters, and the result is 95, the number of beads required (Discussed in Chapter Two).
- Thread one bead on the cord, leaving about 4" hanging free. Loosely tie a knot through this bead, so that it can serve to keep the remaining beads from falling off as they are being strung.
- After remaining beads have been strung, cut the cord to 4", enough so that you can make a knot easily.
- Free the knot from the bead that was first strung. Tie the two end strands together, but do not make a knot just yet.

Pull the beads taut while holding both sides of the strand with the last 2 or 3 fingers of each hand. Pull as tight as you can (within reason); when there are no gaps in the thread, complete the knot with a second tie.

For added security, make an additional knot on top of the last one, cut the ends of the strands close to the knots.

- Apply a drop of glue directly onto the knots.

This will make a quite serviceable necklace, but it is not a method you would want to use with better beads, nor if you would expect to sell the necklace. From here on, we'll show you how the professionals work.

## 5.2 Necklace of uniform-size beads, finished with clasp – 18"



1. Thread on a bead tip, entering cup of bead tip from the top, knot, glue and clip the cord (as shown in Chapter Four).
2. Thread all beads.
3. Thread remaining bead tip, entering cup of bead tip from the bottom, knot, glue and clip the cord (as shown in Chapter Four).
4. Using a pair of pliers, close the loops on each of the bead tips.
5. Open the jump rings (as shown in Chapter Four), and connect each ring to each bead tip. Alternately, some beadmakers prefer to close the bead tip directly onto the jump ring or clasp.
6. Connect each jump ring to the loop on either side of the clasp, (unscrewing the clasp first). Close the jump rings, then apply a drop of glue onto the slit in the ring to strengthen.

## 5.3 Necklace of uniform-size, textured beads – 22"



Each of the beads in this strand are the same diameter, yet a totally different look has been achieved by the mixing in of beads with a texture, such as these filigreed gold balls.

### Materials:

57, 8 mm jade beads / 18, 8 mm gold filigree balls / 2 bead tips / 2 jump rings / 1 clasp / 1 card #4 cord, with needle attached (These beads were found to have a larger borehole than those in the first two projects, therefore a large thread was chosen) / Tweezers / Pliers / Scissors / Glue

### Using the Techniques Learned Earlier:

1. Attach bead tip.
2. Thread pattern of 3 jade beads, 1 gold bead, ending with the jade beads.
3. Attach bead tip.
4. Attach jump rings to each end.
5. Attach the clasp.

Voila, you now have a fine quality, professional necklace anyone will be proud to wear.

## 5.4 Necklace with different sized beads, with clasp – 34"

1. Thread on bead tip.
2. Thread beads in the following pattern: One gold bead, 10 small carnelian, one gold, one rose quartz, 10 small carnelian, one gold, 2 rose quartz, one gold, one large carnelian, one gold, 2 rose quartz, one gold, 10 small carnelian, one gold, 2 rose quartz, one gold, one cloisonne bead, one gold, 2 rose quartz, one gold, 5 small carnelian, one gold, one rose quartz, one gold, 5 small carnelian, one gold, 2 rose quartz, one gold. This is one half of the strand.
3. Add a cloisonne bead, this will be the center point of your necklace. Then complete remaining half of the strand by reversing the order of beads strung in Step 2.
4. Make sure the strand is tight.
5. Add bead tip.
6. Attach clasp.

### Materials:

80, 6 mm carnelian beads (small) / 24, 8 mm rose quartz beads / 30, 3 mm gold beads, fluted / 2, 8 mm carnelian beads (large) / 3, 12 mm cloisonne beads (to match colours of stone beads) / 2 bead tips / 1 clasp / 1 card #3 nylon, with needle attached / Tweezers / Scissors / Pliers / Glue

# CHAPTER SIX

## TASSELS, LOOPS & FRINGE

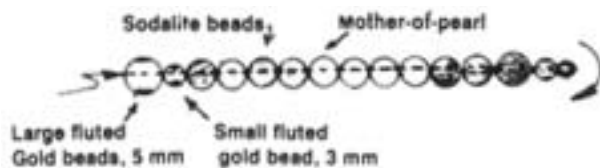
You've seen how the effect of a single strand can be changed by simply mixing various sizes and textures of beads. By adding tassels, fringe or a pendant, a new dimension is added. This chapter has three projects which will show you how to create a different mood, from the casual to the elegant, with the addition of a few beads attached in new ways.

### 6.1 Single-strand necklace with tassels – 26"

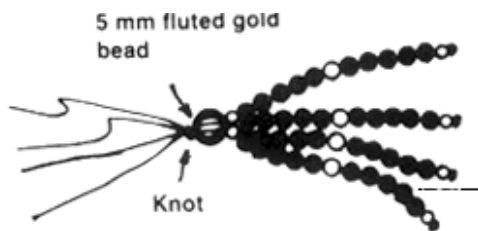
**Note:** When using stringing needle, pass thread thru needle and use it doubled with knot in end if desired.

First construct the tassels.

1. There are four tassels and each is constructed identically.
2. Thread thru a 5 mm fluted gold bead, then a 3 mm fluted gold bead, then thru five small sodalite beads, a small mother-of-pearl bead, then five more small sodalite beads.
3. Add one 3 mm fluted gold bead and approx. 1/4" length of gold French wire, then return thru the last bead, knot, then thru the next to last bead, knot again, thread thru the next bead and snip off excess. Glue the knots.



4. Tassels No. 2, 3, and 4 are made identically, starting with the same 5 mm fluted bead you started with for tassel No. 1.
5. When tassels No. 2, 3, and 4 have been completed, you should have four threads emerging from one end of the 5 mm fluted gold bead.



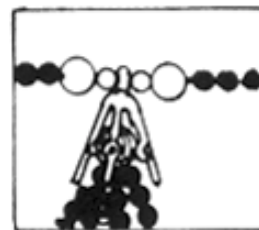
6. Knot the four threads together by, first removing slack, then take two strands in each hand and tie a square knot on top to keep the knot from slipping thru the hole in the bead. Glue the knot.
7. When glue has dried, cut off any two threads above the 5 mm gold fluted bead. Attach the needle to each of the remaining top of the bellcap, then string in one 3 mm fluted gold bead and one 5 mm fluted gold bead to each strand.



#### Materials:

56, 6 mm sodalite beads / 24, 6 mm mother-of-pearl (m.o.p.) beads / 29, 5 mm gold beads, fluted / 6, 8 mm gold filagree balls / 32, 4 mm sodalite beads / 10, 3 mm gold beads, fluted / 4, 4 mm mother-of-pearl beads / 2 bead tips, gold / 1 large bell cap, gold / 1" gold French bouillon / 1 stringing needle / 10' dark blue silk thread / 1 clasp / Glue / Scissors / Tweezers / Pliers

8. You have now completed the tassel portion (that's the hard part). Good work! Now, go have a cup of coffee. When you come back we'll finish the necklace.



#### THE NECKLACE

1. Connect a bead tip to approx. 36" of thread.
2. Thread beads in the following order:
  - (A) One, 5 mm fluted gold bead
  - (B) Eight, 6 mm sodalite beads
  - (C) One, 5 mm fluted gold bead, then two 6 mm m.o.p. beads, then one 5 mm fluted gold bead, a 8 mm filagree ball, another 5 mm fluted, 2 more 6 mm m.o.p.'s, and the final 5 mm fluted
  - (D) Repeat step (B)
  - (E) Repeat step (C)
  - (F) Repeat step (B)
  - (G) Repeat step (C)
  - (H) Add 4, 6 mm sodalite beads
  - (I) Add the tassel by entering the 5 mm bead, thru the 3 mm, thru the bellcap and out thru the two beads on the other end
  - (J) Repeat Steps (A) thru (H) in reverse
3. Add bead tip and clasp portions.
4. Return to center of the necklace (the tassels have not yet been tied to the necklace).
5. Gently stretch the necklace by pulling on the clasp halves This will equalize the tension thru the necklace.
6. Tie the tassel threads to the necklace at the point the threads emerge from the necklace. Glue knots and trim and it's ready to wear.

## 6.2 Single-strand with multi-looped pendant

This design has endless variations. We chose to use a graduated strand for the necklace portion and nuggets for the pendant portion. You can use round beads on top and bottom or any combination of beads you desire. To make the instructions easier to adapt to other shapes and sizes of beads, we've given length in inches rather than numbers of beads. Like all the best recipes, quantities are approximate.

First make the loops; each loop is made the same way except one is 6" long, the second is 7" long, the third 8" long.

### The 6" loop:

1. Thread on one 4 mm gold bead,  $\frac{1}{2}$ " of French wire, go thru the jump ring and thru another 4 mm gold bead. This should leave the jump ring resting on the French wire.
2. Add approx. 1" of nuggets followed by a 4 mm gold bead. Repeat this pattern until you've reached 6" overall length.
3. Form the loop by going back thru the original 4 mm gold bead, the French wire, and the next gold bead.
4. Pull snug, then knot at the two places the thread emerges from the loop. Trim and glue knot.

The 7" loop and the 8" loop are made identically, passing thru the same jump ring as the 6" loop of course, the 7" loop and 8" loop are made 7" and 8" long respectively in Step 2. The multi-loops are now complete, whew!

### THE NECKLACE

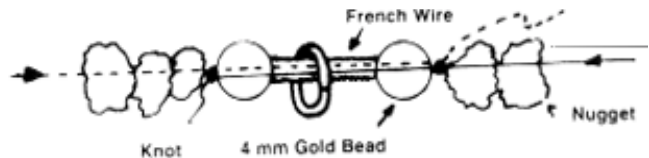
Lay the strand of graduated turquoise heishi on your bead board, or if you don't own one, on a Turkish towel. Locate the center of the strand and mark it with a small piece of masking tape. Remove the cord from the turquoise strand being careful to keep the pieces in the exact position they were in originally.

### Materials:

1, 16" length graduated turquoise heishi (tubes) / 24" of small turquoise nuggets / 55, 4 mm gold beads / 2, 3 mm gold beads / 1, gold clasp, a hook and eye in this case / 3" of gold French wire / 1, large gold jump ring / Small piece of masking tape / 7' of medium blue silk / 1, stringing needle / glue / tweezers / pliers

### Stringing:

1. Start stringing by attaching the clasp with French wire then a 3 mm bead, then begin your pattern.
2. The pattern is approx. 1  $\frac{1}{8}$ " of turquoise heishi, followed by a 4 mm gold bead, 2 turquoise nuggets and another 4 mm gold bead.
3. Repeat the pattern seven times which should bring you to the masking tape marking the center of the heishi strand.
4. Now thread on  $\frac{1}{2}$ " of French wire and pass it through the same jump ring holding the loops together.
5. Finish the necklace by reversing your steps up the other side. You've created a beautiful necklace that is quite striking when worn.



## 6.3 Single-strand with beaded fringe – 18"

**Note:** Take your time while working on the necklace, especially the fringe, for if you find a bead is out of sequence, it will be necessary to start the necklace from Step 1, due to the knots.

1. Attach a bead tip.

### First third of necklace:

2. Thread beads in the following pattern: silver bead, black onyx, silver, howlite, silver. Continue until you have threaded 8 each of the black onyx and howlite, ending with the silver bead.

### Fringe:

3. The fringe is incorporated at the same time as rest of necklace is strung, unlike the first two projects in this chapter. Use the picture below as a guide to the direction the thread should follow. The beads are in the same pattern as for the rest of the necklace: silver, black onyx, silver, howlite, silver. The picture shows 8 fringe (four on each side of center). Note that each strand is one bead longer than the previous fringe, until you reach the center.
  - a) When the last silver bead on each fringe has been threaded, you will reverse the direction of the thread, going up the fringe, first making a knot on the way back between the second silver bead

### Materials:

100, 3 mm silver beads / 47, 8 mm black onyx beads / 36, 6 mm howlite beads / 2 bead tips / 1 clasp / 8' of silk thread ( use the heaviest thread possible, which will fit thru your beads) / Glue / Tweezers / Stringing needle / Scissors / Pliers

- b) Proceed up the fringe at the top, remove slack and knot again, then thread a silver, black onyx, then silver before starting new fringe.
- c) Continue threading and knotting fringe in pattern, making certain that the last four fringe are the reverse lengths of the first four fringe.

### Last Third of Necklace:

4. Reverse the pattern of the beads from the pattern in Step 2: silver, howlite, silver, black onyx, silver, etc.
5. Attach a bead tip.
6. Attach the clasp.

# CHAPTER SEVEN

## THE MULTIPLE STRAND

Multiple strands are luxurious, probably because of the quantity of beads involved. The impact of the multiple strand is not diminished when the strands are brought together into a single rope, rather this casual handling of an abundance of beads is most effective. This chapter will show:

- a) How to determine number of beads required when strands are of differing lengths;
- b) A method for combining the strands into a single strand;
- c) Using a clasp designed for multiple strands.

### 7.1 Three strand necklace, graduated lengths – 18"

Each strand should be longer than the one above it, and should hang so that the bead on the center of one strand does not touch the bead centered on the next strand. Therefore, each strand must be from 1/2" to 2" longer than the previous one, depending upon the size of the beads being used. The larger the beads, the longer each successive strand must be to prevent the beads from touching the previous strand. Each of the strands in this necklace is 1" longer than the strand above it.



1. First Strand:

- a) Attach a bead tip.
- b) String beads in the following order: 2 freshwater pearls, gold bead, repeat pattern until you reach a length of about 17", ending in 2 freshwater pearls.
- c) Attach a bead tip. Set strand aside.

2. Second Strand:

- a) Attach a bead tip.
- b) String beads in the following order: 3 freshwater pearls, gold

**Materials:**

104 fresh water pearls / 72, 4 mm gold beads, smooth finish / 36, 6 mm sodalite beads / 6 bead tips / \*2, 5 mm jump rings (3 strands connect to each jump ring) / 1 clasp / Glue / Tweezers / Scissors / Pliers / 10' white silk / 1 stringing needle

\*When using clasp designed to hold 3 strands to each side, you may attach each bead tip to one loop in the clasp.

bead, sodalite, gold bead, repeat pattern until you reach a length of about 18", ending with 3 pearls.  
c) Attach a bead tip. Set strand aside.

3. Third Strand:

- a) Attach a bead tip.
- b) String beads in the following order: 1 freshwater pearl, then gold bead, sodalite, gold bead, 3 freshwater pearls, repeat pattern until you reach a length of 19", and end with a single pearl. (Note: the pattern in this strand consists of 3 pearls throughout, using the single pearl at the beginning and the end only.)
- c) Attach a bead tip.

4. Connect the three strands to a single jump ring, making sure the strands are attached in the order of their lengths (17", 18" and 19"). Attach the other ends of the strands to a jump ring (do not mix up the order of the strands!).

5. Attach the clasp.

### 7.2 Three strands, with strands of equal lengths

A necklace with multiple strands of equal lengths can be very striking, regardless of the lengths of the strands you use. Because these strands will hang together as one, the necklace will be less bulky, and more effective, if smaller beads are used, certainly none greater than 6 mm in diameter.

Multiple strands of the same length are attractive if they are twisted together before being clasped.

Using the formula given in Chapter 2, decide how many beads you will need for the desired length.

Follow the directions given in the last project for attaching the strands to the clasp of your choice.



## 7.3 Multiple strands, brought together to form a single strand – 28"

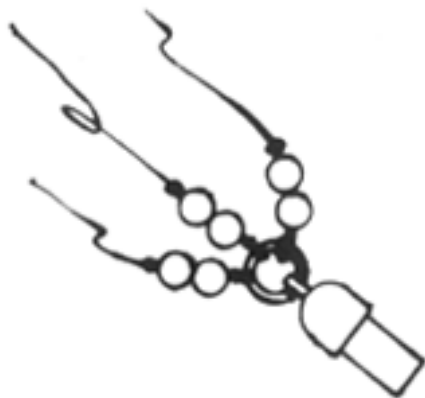
This is a fun necklace to make, for even though there is a basic design, there are no rigid rules as to the precise pattern to follow when combining the beads; and, it makes excellent use of beads you may have remaining from other projects.

Although different colors are used, the key is in the balance of the colors. This project uses three colors of stone beads, with gold beads for accent. The stones are: mother-of-pearl, carnelian, and tiger eye.

1. Thread three strands of cord (you will be working these strands simultaneously).
2. Attach jump rings to both ends of the clasp or use a clasp capable of taking three strands.

### For each of the three strands:

- (a) Begin stringing by threading on a small mother-of-pearl (m.o.p.) bead and a small gold fluted bead. Add  $\frac{1}{4}$ " to  $\frac{1}{2}$ " of the French wire.
  - (b) Thread through one jump ring and back into the gold bead you've just come out of in into the m.o.p. bead, causing the French wire to form a loop around the jump ring. Pull taut, knot and glue. Trim excess.
3. Begin the other two strands in the same manner, passing thru the same jump ring.
  4. Using the pin, anchor the strands through the jump ring to the work surface (using styrofoam board, or the beading board).



The design of the necklace consists of 12 sets of 3 strands each, with the large mother-of-pearl and large gold beads acting as a separator between each set. Each of the strands with a set has 4 small beads (not counting the first gold bead put on in Step 2). These three strands are then passed through the larger beads, as though they are a single strand of thread, then another set of 3 strands is strung and passed through the larger beads, and so on, for a total of 12 sets of 3 strands each.

5. For each of the 3 strands, thread on 4 of the smaller beads. The pattern of the beads on these strands is not important as long as you are pleased with the effect produced when the 3 strands are parallel with each other. You will probably want to stagger the order of the beads on the individual strands.

### Materials:

24, 4 mm tiger eye / 24, 4 mm carnelian / 22, 6 mm mother-of-pearl / 11, 8 mm gold beads, fluted / 6, 4 mm gold beads, smooth finish / 95, 4 mm mother-of-pearl beads / 2, 5 mm jump rings / 2-3" French bouillon gold / 3 cards No. 2 nylon cord (or 3 strands, each about 36" long) / 3 needles / Glue / 1 clasp / Scissors / 1 pin / Pliers

6. Pass all three strands through a single 6 mm mother-of-pearl, a large gold bead, then another mother-of-pearl.
7. Repeat Steps 5 and 6 for a total of ten (yes, ten) sets, each ending with the large beads.
8. Repeat Step 5, and 2 in reverse to make both ends the same.



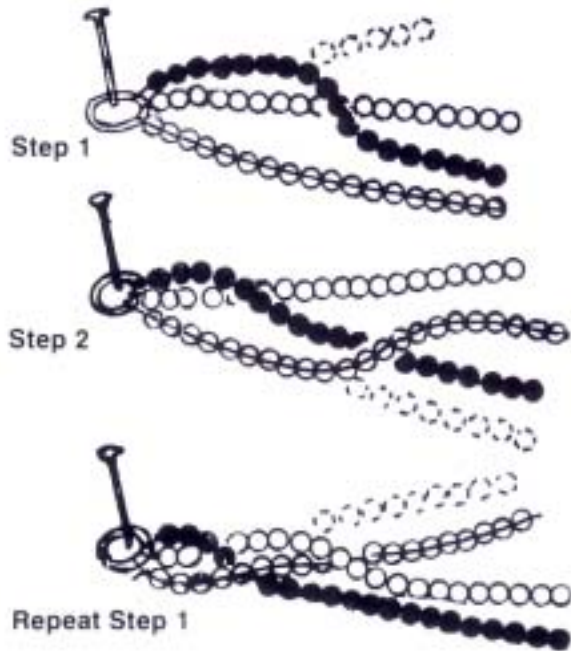
# CHAPTER EIGHT

## THE BRAIDED LOOK

The techniques of braiding together multiple strands are useful to give “body” to multi-strand necklaces and to heighten and add interest as each strand, first dominates, then submerges into the pattern these effects are best achieved using small (4mm) beads.

- a. Braiding three strands together (8.1)
- b. Braiding four strands together (8.2)

### 8.1 To create 3-strand bracelet – about 7 ½”



#### Materials:

145, 4 mm tiger eye beads / 75, 4 mm gold beads (fluted) / 2.5 mm split jump rings (gold) / 2-3 inches French wire / 1 card No. 2 nylon cord (or 3 strands, each about 16” long) / 3 needles / Glue / 1 spring-ring type clasp / Pliers / 1 pin

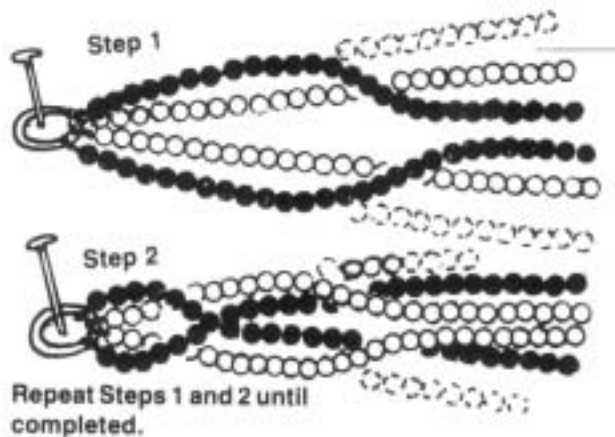
#### Braiding

Separate the three strands. Take the top (or right-hand) strand and pass it over the center strand, so that it lies between the center and the bottom strand.

Take the opposite strand and again pass it over the center strand.

Repeat Step 1 and Step 2 alternately, and you’re braiding.

### 8.2 A braided 4-strand necklace – 19”



#### Materials:

260, 4 mm mother-of-pearl beads / 130, 4 mm garnet beads / 130, 4 mm blue fossil beads / 8 bead tips / 2, 6 mm split rings (gold) / 1 screw-type clasp (gold) / 1 card No. 2 nylon (or 4 silk strands, each about 26” long) 4 stringing needles / 1 pin / Tweezers / Pliers / Glue

1. For each strand: (2 mother-of-pearl, 1 each fossil and garnet)
  - (a) Connect a bead tip. Connect all our bead tips to one split ring. Fasten split jump ring with a pin to the work surface.
  - (b) Thread 130 beads.
  - (c) Connect a bead tip.
2. Braid all four strands together, as illustrated below, for a length of about 19”, (strands will be in original order when finished).
3. Connect the four bead tips to the other split ring, being careful to retain proper order.
4. Connect each split ring to one-half of the clasp.

# CHAPTER NINE

## WEAVING

No, you don't have to dash to the attic to hunt for that long lost loom! Weaving is a term that describes the process of combining beads in a strand by interlacing the thread through the beads. When beads are joined in this fashion, the effect is delicate and can be rather lacy, depending of course, on the pattern and the colours of the beads that are thus connected. This chapter provides instructions for two methods of weaving beads. The first is the 'cross-over' technique. It is called that because a thread with two needles are used, and during the process of stringing the beads, the two threads cross-over through one or more of the beads. The other method is for the creation of a classic Victorian-style choker by weaving techniques.

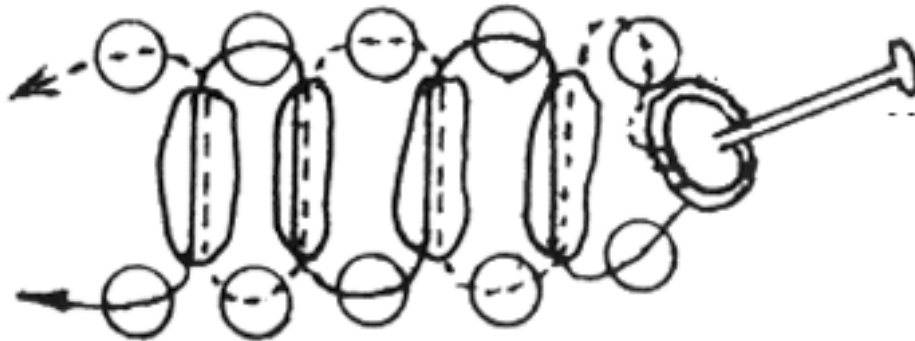
### 9.1 Cross-over bracelet – 8 1/2"



#### Materials:

40 freshwater pearls / 82, 4 mm gold beads, fluted / 2, 4 mm jump rings / 1 spring-type clasp / 4' silk thread / 1 pin / 2 needles / Glue / Scissors

1. Glue the slit in one of the jump rings to strengthen the ring.
2. Thread the cord with a needle at each end and center the jump ring on the thread.
3. Loop the cord twice through the jump ring. Secure the jump ring to the bead board with a pin to hold it in place while you are weaving the beads.
4. Thread a gold bead onto each of the two strands.
5. With one of the needles, thread on a pearl.
6. With the other needle, pass through the same pearl, exiting on the opposite end of the first needle. (See Figure below)
7. With a strand in each hand, gently pull the pearl snug against the two gold beads.
8. Continue Steps 4 through 7 with the remaining beads, ending with the gold beads.
9. Slip the other jump ring onto one of the cords, and loop the thread twice around the ring.
10. Pass this needle through the opposite gold bead, tie a knot, then pass through the pearl and knot once more.
11. Repeat Step 10 with the other needle.
12. Cut the ends of the threads close to the knots, and apply a drop of glue to each knot.
13. Slip the jump ring through the loop on the spring clasp, then apply a drop of glue to the slit in the ring for strengthening.



## 9.2 Classic Victorian-style choker with ribbon threaded through

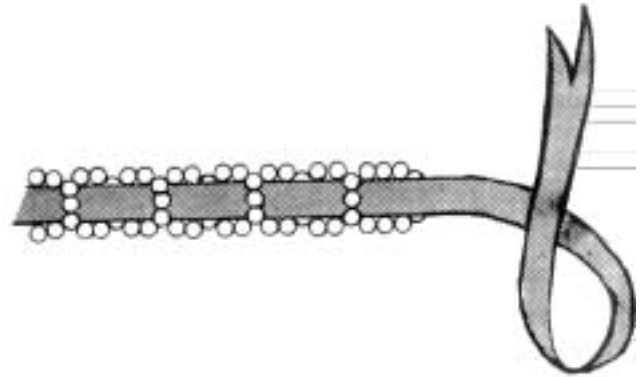
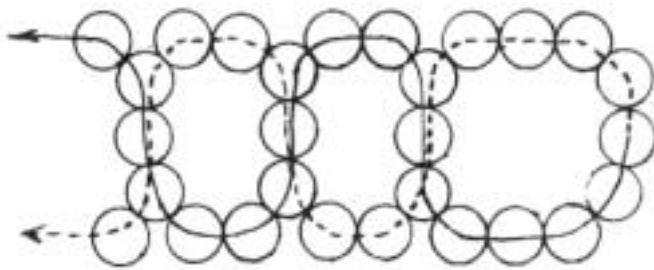
A necklace of this style has long graced the neck of a debutante at her first ball, and there are few necklaces more charming. The technique is the same basic method as for the bracelet just illustrated, but in this case, all of the beads will be of equal size, no more than 4 mm, but preferably, 3 mm and ideally, either small pearls or mother-of-pearl.

To go around a neck of 15", the length of the finished strand should be about 14". Remember, a narrow velvet ribbon will be woven through the beads and will be tied at the back of the neck, so it is not necessary that the strand of beads be equal to the diameter of the neck.

If you are using 3 mm beads, then you will require about 350 beads for a length of 14", and about 260 beads if the diameter is 4 mm. These approximate figures were achieved as follows:

1. The necklace consists of a series of loops, through which the ribbon will be woven.
2. Each set of two loops contains 17 beads, and measures  $\frac{3}{4}$ " if the beads are 3 mm, and 1" if the beads are 4 mm, as shown here:
3. Divide the finished length, say 14", by the length of the two loops, either  $\frac{3}{4}$ " or 1". This means that there will be 18.6 loops in a 14" strand. Dropping the .6 to 18, then multiplying 18 times the number of beads in the two loops (17), we get 306 beads. If we round off 18.6 to 19, then multiply that times 17, we get 323 beads.

The 4 mm was easier to figure, as two loops equals 1", so we multiply 14 times 17, and get 238 beads.



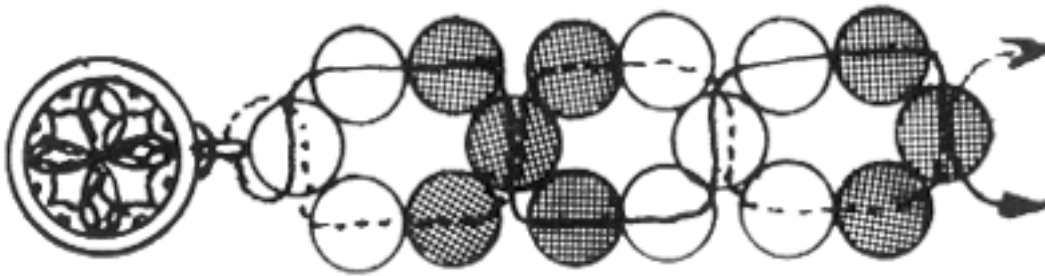
## 9.3 Cross-over Necklace – 25"

1. Center a jump ring on the thread, as described in steps 1-3 of project 9.1.
2. With the right hand needle thread on 3 carnelian beads, then a mother-of-pearl bead.
3. With the left hand needle, thread a carnelian, then mother-of-pearl.
4. With the same needle, pass through the center of the mother-of-pearl on the right hand needle.
5. With a strand in each hand, pull each of the cords to tighten the bead just crossed over.
6. Continue to thread the remaining beads, following the pattern shown to the right, ending with a mother-of-pearl.

### Materials:

203, 4 mm mother-of-pearl beads / 138, 4 mm carnelian beads / 2, 3 mm jump rings / 1 clasp / 1 card #2 nylon cord / 2 needles / Pin / Scissors / Glue

7. Attach the remaining jump ring, and join the threads as for Steps 9 through 12 of Project 9.1.
8. Attach the clasp.



# CHAPTER 10

## THE KNOTTED NECKLACE

One of the more elegant presentations of beads or pearls is the single strand with each bead or pearl individually knotted. Many, but certainly not all, of the beads sold in the finest jewelry stores have been prepared this way.

Individually knotting has both visual and functional advantages. Visually, the knots serve to separate each bead, allowing you to see more of each bead. This gives each bead the look of an individual “work of art.”

Functionally there are two advantages: First, with softer materials such as pearls or malachite, it keeps the beads from rubbing against each other and wearing excessively. Equally important, when using valuable beads, is the consideration of what happens if the strand should break while you’re whirling around on the dance floor. With knotted beads you can’t lose more than one bead or pearl.

1. Stringing material: Choose a silk thread that matches the color of your bead and is of sufficient thickness that a double strand of the silk will fit snugly thru the bead hole. Not too loosely or your knots will pass thru the bead hole. You will need length of silk approximately six times longer than the length of the finished strand. For a 18” (1½’) finished necklace start with 9’ of silk.
2. Attach your stringing needle to the double silk and tie the ends together in a simple knot, loosely, to prevent the beads from slipping off. Leave about 6” of silk hanging free, this is to allow the French wire, clasp and final knots to be added later.
3. Add on 4 more beads. The knotting begins after the fourth bead on the strand.

4. Make a loose overhand knot in the cord. (See figure A)
5. When the knot is near the bead, gradually tighten the knot around the tweezer points, (which are against the adjacent bead), then remove the tweezers. (See figure C)
6. Place the tweezers or a pair of pliers to the side of the knot furthest from the bead, and press gently, but firmly, to tighten the knot securely against the bead. (See figure D)
7. Add a bead and repeat Steps 4 through 6 until all but the last four beads have been strung.
8. Add the last four beads.
9. Cut a length of French wire to about ½” and thread it down so that it rests against the edge of the last bead. Add the clasp.
10. PASS the thread down through the last bead, causing the wire to form a loop around the attachment or the clasp.
11. Make a knot between the first and second beads.
12. Pass the thread through the second bead and knot, then the third bead, and knot again,
13. After the last knot between has been made between the third and fourth beads, pass the thread through the next bead, and cut close to the edge of the bead, concealing the end of the strand inside of the bead.
14. Apply a small drop of glue to each of the knots just made.
15. Remove the temporary knot on the other end. (Some bead stringers use an alligator clip instead of a temporary knot).
16. Repeat Steps 9 thru 14 on the other end.
17. Put on some sharp clothes to wear with your elegant creation and take yourself someplace really nice for lunch, you deserve it!



Figure A

Place your tweezers through the knot and grasp the silk next to the beads as shown in Figure B.



Figure B



Figure C



Figure D

## 10.1 Double strand knotted bracelet, using separators – 8 1/2"

The separator serves to hold the strands parallel to each other, and add to the visual impact of the overall design. When working the separator into the pattern, the strands are beaded then passed through the individual holes of the separator simultaneously.

**Note:** When using round or oval style, three-strand clasps you may find the top and bottom attachments are closer to the center of the clasp than the center attachment. To get the beads to line up, start and finish the top and bottom strands with a 2 mm bead.

1. Divide each strand as follows:
  - a) 7 of the beads
  - b) 11 of the beads
  - c) 7 of the beads
2. Lay the strands out side one above the other, to ensure that the corresponding beads in each strand are in identical alignment. If not, switch beads around until they are.
3. Attach a bead tip to one end of each strand following instructions for Using Bead Tips.
4. Thread on a bead, and following steps previously given, tie a knot.
5. Repeat Step 5 six more times, for a total of seven beads with knots after each bead.
6. Pass the thread of one strand through one of the holes in the separator. Repeat with the other strand. Knot each strand to secure the separator.

### Materials:

50, 6 mm beads / 2 strands silk cord, each about 48" long / 2 needles / 2 double-strand separators-6 mm hole spacing / 4 bead tips / 1 double-strand clasp / Glue / Tweezers / Scissors / Pliers

7. Thread 11 beads onto each of the strands, knotting after each bead.
8. Repeat Step 6.
9. Thread on and knot seven beads to the end of each strand.
10. Attach a bead tip to each strand.
11. Attach the bead tip at the end of each double strand to the corresponding loops on the double strand clasp.
12. Repeat with the bead tips or the other end of the strands, making sure that both sections of the clasp are facing the same direction, either up or down and all four bead tips are facing downward, towards the wrist of the wearer.



## CHAPTER 11 SOME HELPFUL HINTS

1. Be very careful when removing beads from the material on which they were originally strung. Sometimes the beads have been put on so tight that they have a tendency to practically explode, flying in all directions, when the cord is cut. Hold the strand close to the surface of the work area, with the surface being something non-slick, like felt, velvet, carpet or a towel.
2. Do not try to break a strand directly into a small container, for this is another sure way to lose beads. Open the strand into a large container first, then transfer to a smaller one.
3. Small containers that have lids are excellent for storage, such as baby food jars, small jars that held mayonnaise or pickles, even cottage cheese cartons.
4. Separate the beads by color and size before you start a beading project. Separation by size is especially important when you will be using beads of the same color, but with varying sizes, in the same design. It is easy to get into a rhythm and before you know it, you've used the right color, but the wrong size!
5. Do take your time when working on any beading project. Discovering that a bead is out of sequence in the pattern may result in having to start over—particularly when knots have been incorporated.
6. Be careful that the thread does not tangle in itself and knot. This is easy when working with long strands, and these 'self-knots' are extremely difficult to remove.
7. When you are working on designs that are using the cross-over technique, it is important that there is a constant tension on the beads to avoid gaps of thread appearing in between the beads. An easy way to keep the strand taut during the stringing process is to fasten one end of the strand to a surface, such as a beading board, or a large piece of Styrofoam, using a T-pin.
8. Do be careful when applying glue onto knots, especially when the knots are in close places (and they usually are!). Once the fast-drying glue has dried, it is there forever. Make certain that you apply only the smallest amount to do the job—more may cause the beads to be cemented as well.
9. When using thread on cards with the needle attached, don't try to salvage the needle. The needle is apt to have been bent from passing through the beads, and the eye of the needle may have become compressed enough that new thread cannot be passed through. Packets of additional needles are inexpensive, and you will find the insurance a worthwhile investment.
10. Take your time in selecting beads, and try it this way and that until you have found the best combination. Do not work on too many shapes, colors and materials for one piece of jewelry. Bluish and transparent beads are particularly attractive when combined with silver. Gold, on the other hand, goes well with white, dark green and reddish shades.
12. String a sample assortment of the beads that you will be using to ensure that the boreholes of all the beads will be compatible with the stringing material you have chosen. All boreholes are not created equal!