Wirewrapping Basics

So you want to play with wire? This class is designed to:

- Provide some basic instruction in wire working, including materials and safety
- Teach two basic wire wrapping techniques that are particularly useful in working with beads
- Teach the basics of making findings, including jump rings and a basic hook clasp.

A Brief History of Wire in Jewelry

Formed wire has been used in jewelry almost as long as humans have had the ability to work metal. It has been used both to join elements together, and for surface decorations such as filigree and as trenches for enamel. Ancient Greeks and Minoans would make wire by rolling sheetmetal between two hard surfaces. Later, the Romans and Vikings would use drawplates to reduce thickness and stretch wire.

A gold girdle torc made of a spirally twisted wire dating to 1200 BC was found in 1692 in Wales. Posamentarie style jewelry, using wire spirals as design elements, date from the 11th Century BC. W-shaped earrings dating from 800 BC used wire as the finding passing through the ear lobe. Saxons used wire, plaiting and twisting it into finger rings torcs, and brooches.

In the late Middle Ages and into the Renaissance, wire became an element as a linking device – jump rings, chains, and sometimes beaded chains, the most common of which was the rosary. Though beads were most often strung on cords, beads that were incorporated as dangles on larger pendants or brooches were strung on wire.

For more information:
Newman, Harold An Illustrated Dictionary of Jewelry, 1981.
Evans, Joan A History of Jewelry, 1100-1870, 1953.

Getting Started: Tools and Materials

In this class, we will be using:

Round nose pliers
Chain nose pliers
Wire nippers
A small metal file
A dowel (in this case a knitting needle or a ball point pen)
24-guage wire
20-guage wire
18-guage wire
Assorted beads

It is easiest to work with a tray covered in cloth as a work surface. The cloth and the edges of the tray prevent wire cuttings and beads from rolling around too much and from getting everywhere. If you don't have something like that handy, wrap a shoebox lid in a scarf.

Some safety tips about working with wire:

1. When using nippers, always point the beveled edge of the nippers away from your face or anyone else's. Instead point it down into the tray so that the tray can catch the cuttings for easy clean up later. If you are cutting a piece of wire in such a way that you can hold the wire piece that will be cut off, do so. That way it doesn't fly across the room.
2. Don't force anything! Unless you are working with very heavy gauge wire, the wire should move and bend fairly easily. Force something too hard with your pliers, and it is sure to break or fly out of your hands.
3. Edges cut by nippers can be very sharp. Be careful about not getting these edges in a position where they could puncture your skin.

Selecting the right wire for a project. Selecting the right wire for a project will make things go much smoother and will result in a better looking, stronger finished product. There are two things that you should remember in selecting your wire:

1. Pick the right gauge. The smaller the gauge, the thicker the wire, and the harder it will be to work with. However, thicker wire will support higher stress levels. If you are working with beads, remember that the wire must be able to easily pass through the hole in the beads. Generally, most larger beads have large enough holes to use any gauge of wire. The gauge of wire you use can affect which type of wrapping techniques are used, which in turn affects the overall design of your piece.

2. You have choices between solid and plated wire, gold, silver, copper, or base metal. Each of these varies in malleability. Softer wires bend easier, but may lack strength under stress.

Making a Wrapped Loop

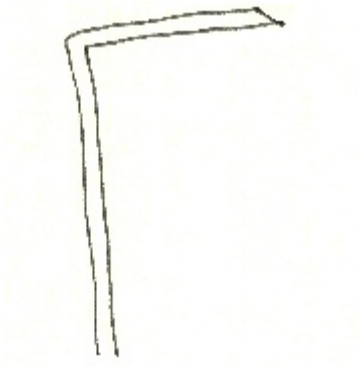
The first skill to be learned is how to make a wrapped loop. Wrapped loops can be done with any gauge of wire, and is particularly good for finer gauges.

STEP 1:

Cut a length of wire that is about the length of your bead, plus 3 inches. Until you get a good sense of how much wire you need, err on the side of cutting more wire than you think you need, rather than less.

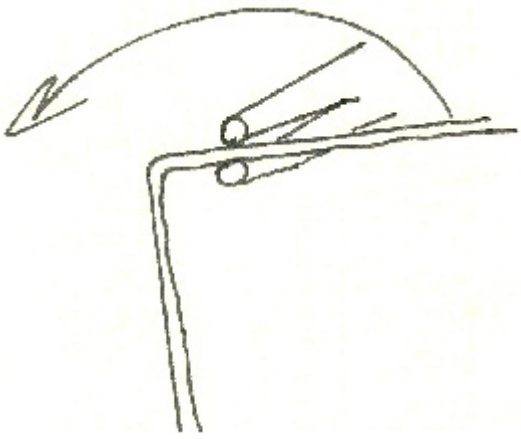
STEP 2:

Take your chain nose pliers and bend the wire, forming a 90-degree angle about an inch and a half down the wire, like this:

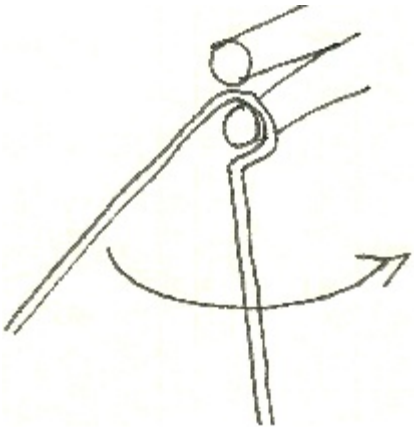


STEP 3:

Using your round nose pliers, grip the top (short) part of the wire you just bent, about half an inch from the bend, like this:



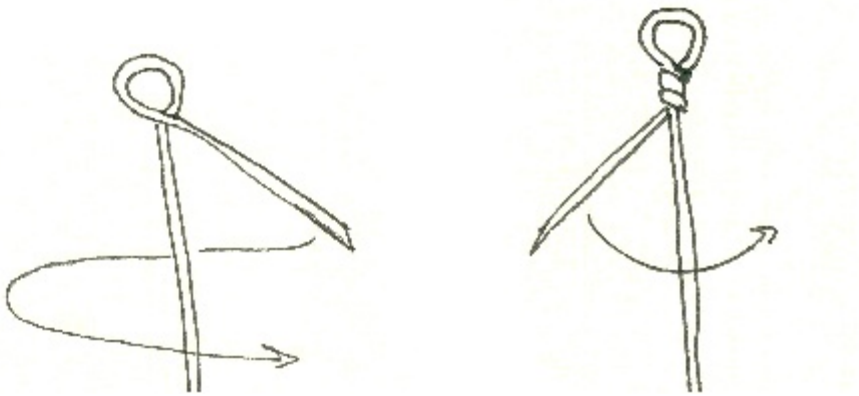
Then roll the wire back in the direction indicated in the diagram (back towards the bend) until you form a small half circle, like this:



Then grab the end of the short part of the wire, and finish the loop, using the end of the round nose pliers as a guide.

STEP 4:

Begin wrapping the short end of the wire around the shaft of the loop:



HINT* You may want to grip the end of the short part of the wire with the chain nose pliers, and hold the loop steady with the round nose pliers. BUT be careful how much pressure you place on the loop, as the round nose pliers will mark the wire if you are not careful.

STEP 5:

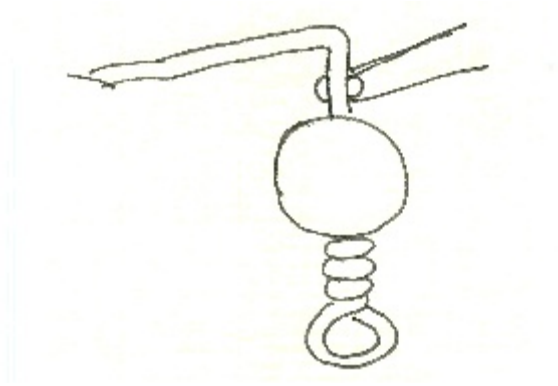
Once you have made at least 3 wraps around the shaft of the loop, trim the excess wire so there is only a short stub. Using the chain nose pliers, tuck the stub in under your existing wraps. If necessary, use the chain nose pliers to push the finished wraps together so that they sit tightly like a coil on the shaft.

STEP 6:

Add your bead.

STEP 7:

Bend the wire at the other end of the bead on a 90-degree angle using the chain nose pliers. Be sure to leave s small amount of wire shaft to wrap around.



STEP 8:

Repeat steps 2 though 5 to create a second loop on the other side. If you are linking the section to another, thread the piece you are attaching onto the wire between steps 3 and 4.

Making a simple loop

The following loop works very well with heavier gauge wire (20 gauge or less). It is also ideal for instances where the bead holes may be much larger than the wire, as the loops can be made as small or as large as you wish.

STEP 1

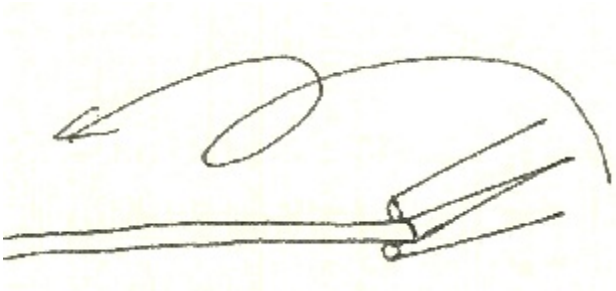
Cut a piece of wire that is about the length of your bead, plus an inch and a half. As always, until you have a feel for it, cut more wire than you think you need.

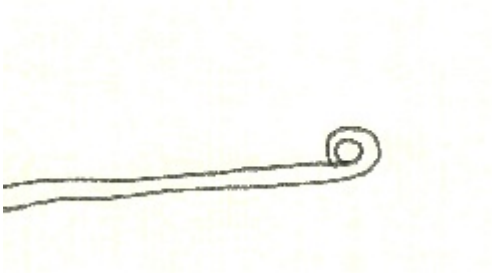
STEP 2

Take the nippers, and cut the end of the wire so that the flat of the nippers is towards the wire (so you get a flat surface). Angle the nippers about 45 degrees, so that you have an angled cut.

STEP 3

Using the round nose pliers, grasp the wire close to the angled end of the wire that you have just cut. Roll the wire so that the angled end meets the shaft of the wire:





STEP 4

Using the chain nose pliers, bend the loop so that it is centered over the shaft. Use the pliers to readjust the loop so that it is flush against the shaft.

STEP 5

Add your bead.

STEP 6

Using the chain nose pliers, bend the wire on the other side of the bead so that it is at a 90-degree angle from the shaft. There is no need for a space between the bend and the bead.

STEP 7

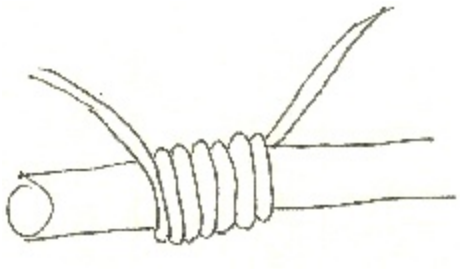
Repeat steps 3 and 4.

Making a Jump Ring

Jump rings can be made from any gauge wire. However, thinner wire will most likely have to be hardened a lot in order to make it strong enough to be effective. Generally, all wires thinner than 18 gauge should be hardened a lot, and anything else should be hardened anyway, for good measure. See the last step for what I mean by "hardening."

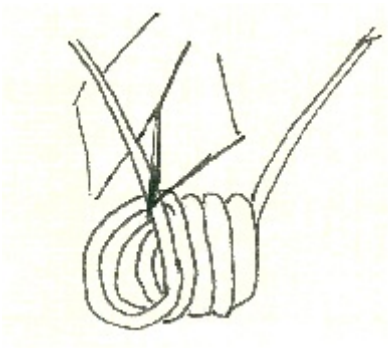
STEP 1

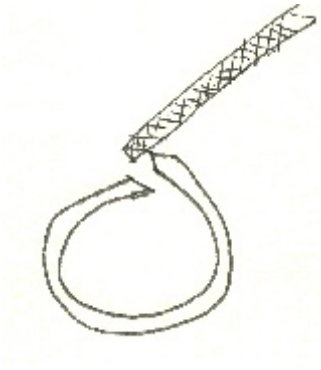
Wind your wire around a dowel. The larger the dowel is in diameter, the bigger your rings. Make sure that your rings are straight on the dowel. If they are not, use a chain nose pliers to adjust them.



STEP 2

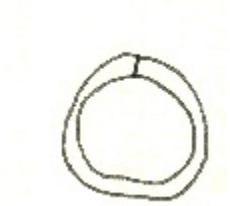
Using the nippers cut the first section of wire from the top of the dowel, and the one immediately after it. You will get one whole ring. Use a file to flatten the bevels caused by the nippers.





STEP 3

Use the chain nose pliers to make the filed down edges of the ring meet



STEP 4

Take a rubber or a rawhide mallet (something that will not mark the wire) and pound on the ring on a hard flat surface. This is "Hardening" the ring. Do it long enough that working the ring open requires some effort.

Why this works: Metal becomes stiffer the more that it is worked. Pounding on the metal works the metal without marking it. Be careful, though. Hardening also makes the metal more brittle. Work the metal too much, and it will break. Also, when you open the jump ring to attach it, make sure you always bend it the same way.

Making a simple hook clasp

This will teach you how to make a simple hook that can be used as a clasp along with a jump ring. It is best to use a heavy gauge wire (otherwise the clasp will require some hardening) – 18 gauge or

heavier is recommended.

STEP 1

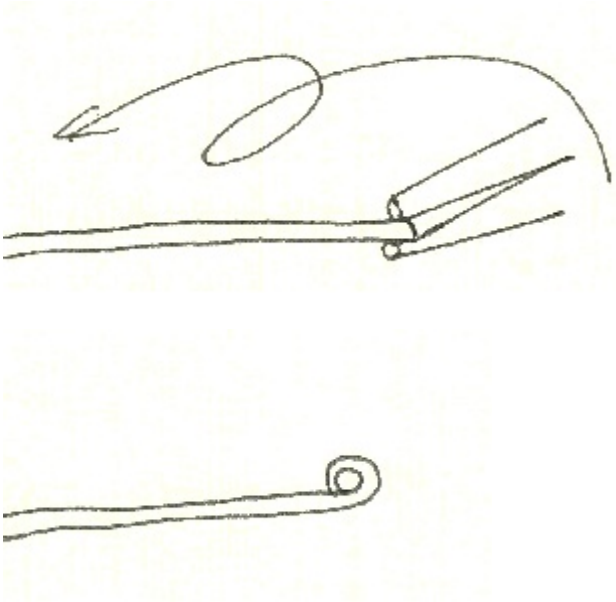
Cut a length of wire about an inch longer than your index finger. You'll probably end up trimming this eventually, but this is a good length to start with until you get a feel for it.

STEP 2

Using the nippers, cut the end of the wire, making sure the flat side faces the wire, and holding the nippers so that they cut at a 45-degree angle.

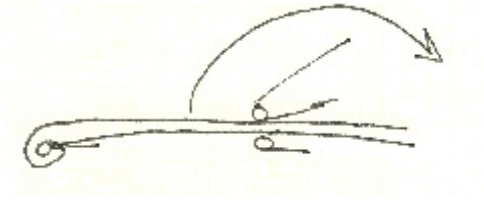
STEP 3

Grasp the end of the wire where you just cut and roll the wire so that the flat end lays flush against the shaft of the wire. This part of the clasp will be decorative, so make the loop as small as the pliers will allow.



STEP 4

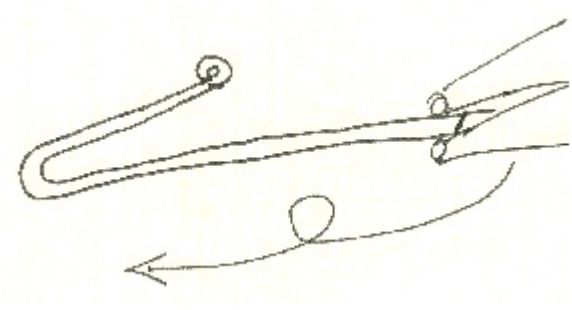
Hold the wire so that the loop you just made faces down. Use the thickest part of the barrel of the round nose pliers to essentially fold the wire over, so that there is now a hook, and some extra wire past the hook.

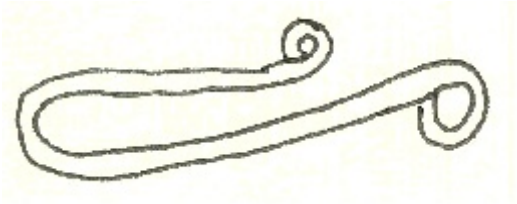


STEP 5

Use the nippers to cut the other end at a 45-degree angle. Using the round nose pliers, roll a loop

that finishes just below the hook. Use the chain nose pliers to make sure the end of the loop lies flush against the shaft. Make sure this loop is big enough that it may be attached to the chain. Harden the finished hook as necessary using a rawhide or nylon mallet.





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