

## **Wiring a Tree** by Roger Snipes

Why should I wrap my bonsai with all that wire? Wiring the trunk and branches of your bonsai enables you to place the trunk and branches into the positions you desire to create a well-shaped bonsai. Wiring and bending of branches is stressful to the tree. In a healthy, vigorous tree this can be beneficial in that it will tend to slow the growth down, decreasing internodal length, helping to reduce leaf size, and aiding in the creation of finer ramification. There is a saying one should keep in mind when wiring: "The more wire, the better the bonsai." This does not mean that you should wrap your tree in wire just for the sake of having wire on it, rather it means that by wiring every branch on the tree you will have attended to the necessary details required to set all the branches into the proper positions. It is this attention to detail that will make a better bonsai. Here are some things to keep in mind when wiring:

### **What size wire should I use?**

Use a diameter that is large enough to hold the particular branch or trunk that you are bending in the desired position. This will vary depending on the type of tree, and the size of the branch you are bending. If you apply wire that is too small, it will not hold the branch in position and you will end up taking it off and reapplying a larger wire. If you apply wire that is too large, it will hold the branch in position, but you run the risk of breaking the branch. The amount of force required to bend a wire that is too large may not allow you to feel if the branch being bent too far. Additionally, as large diameter wire is more expensive than small diameter wire, it is wasteful to use wire that is larger than necessary.

### **Should I use copper or aluminum wire?**

Copper and aluminum wire each have their advantages and disadvantages. Some of these are listed below.

#### Advantages of Copper:

- More esthetically pleasing than aluminum as it weathers.
- More holding power (stronger) for a given diameter than aluminum.
- Cheaper to use than aluminum (considering size of wire vs. holding power).

#### Disadvantages of Copper:

- More difficult to apply than aluminum.
- Must be annealed before use.
- Work-hardens rapidly.

#### Advantages of Aluminum:

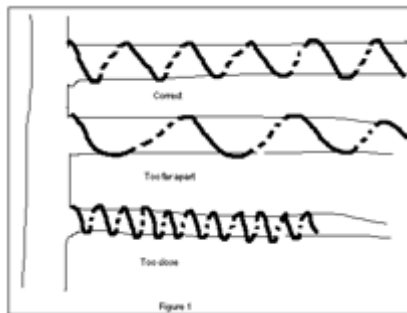
- Easier to apply than copper.
- Does not need to be annealed before use.

### Disadvantages of Aluminum:

- Less holding power(weaker) for a given diameter than copper.
- More expensive to use than copper (considering size of wire vs. holding power).
- Anodizing tends to fade to bright aluminum color with exposure to sunlight.

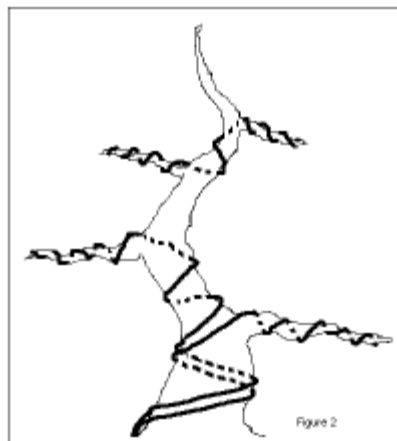
One point that I have not listed as either an advantage or disadvantage is that, due to hardening of the copper wire when working with it, copper must generally be cut off when it is removed, while aluminum can sometimes be unwound from the branch or trunk. I feel that this is neither an advantage nor a disadvantage, because to prevent damage to the tree all wire should normally be cut off when it is removed, whether it is copper or aluminum.

The wire should be wrapped around the branch or trunk at approximately a 45-degree angle (fig. 1).



If the coils are too close together, the wire will not have any holding power when the branch is bent, if the coils are too far apart the wire may stay bent, but the branch can pull away from the wire instead of being held in place.

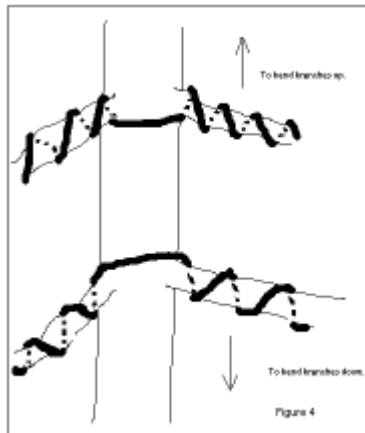
Anchor the end of the wire in the soil at the base of the trunk when wiring the trunk or major lower branches. Wire two nearby branches with one wire, anchored with one or more turns around the trunk (fig. 2). When bending branches down the first turn of wire around the branch should come over the top of the branch (fig. 2). Conversely, the first turn should come under the branch when bending branches up.



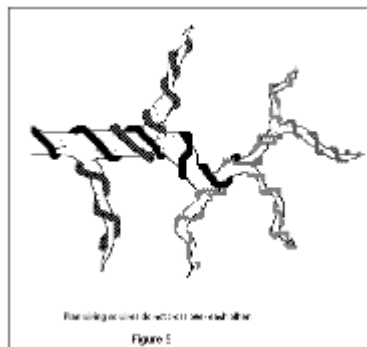
When wiring a trunk or large branch one can either use one large diameter wire, or two (or more) smaller diameter wires to help prevent breakage, apply the wire so that the wire coils around the outside of the bend or curve (fig. 3).



Figure four illustrates a technique for wiring two adjacent branches with one wire without wrapping the wire around the trunk (fig. 4).



When wiring secondary branches plan the wiring so that wires do not cross over each other (fig. 5). Although it is sometimes necessary, crossed wires are unsightly and should be avoided if at all possible.



When applying wire to a branch, the branch and the section of wire that has just been applied should always be supported with one hand while the wire is applied with the other. Do not wrap the wire around the branch by bending the wire against the branch – damage to the bark may result, the wire should be coiled or bent as it is wrapped around the branch so that it barely contacts the surface of the bark.

When wire is applied, take care not to trap leaves or needles between the wire and the bark.

When bending a branch, to help prevent breakage support the branch on the inside of the bend with your fingers.

**Other considerations:**

**How long should the wire be left on?**

The branch should remain wired until it has set into the desired position, however as the branch grows the bark will grow around the wire if it is left on too long, creating an ugly scar that may take years to heal. Therefore, whenever the tree has wire on it, the wire should be checked frequently and removed if it is starting to cut into the bark. If the wire must be removed before the branch has set in position, the branch should be re-wired, wrapping the new wire in the opposite direction, or in a different position from the wire that was just removed. You will find that some fast growing deciduous trees can only have wire left on for a few weeks or months before it must be removed to prevent scarring, while some of the slower growing conifers may have the wire left on for a year or more before it must be removed.

**Can wire be applied at any time of year?**

For the most part yes. However, some times of the year are better than others. Some examples: Deciduous trees are best wired when they are bare of leaves when one can both see the branches, and not have the leaves interfere with the wiring process.

Some trees do not like to have detail wiring done on small branches in late fall – they may suffer some die-back during winter.

Spring flowering trees should not be wired too late in the spring to avoid damage to flower buds that are about to open. This also applies to any tree when the buds are just ready to open in spring.

The foregoing considerations touch on some of the basic principles to keep in mind when wiring, from here you must practice to improve your skills.