WIRING FLOWERS AND FOLIAGE

Design mechanics* are an important consideration in the design and construction of various types of floral arrangements. Stem support materials such as floral foam are necessary to secure flower stems in an arrangement and hold them in place. Anchor tape and pan-melt glue function to secure the stem support material to the container of the arrangement.

Florist wire is another type of mechanical aid used by florists in constructing many types of floral arrangements, including corsages and boutonnieres. Imagine designing and constructing a corsage without using any florist wire. What would the corsage design look like without any wire to support the flowers and maintain the shape of the design? How long would the corsage hold up after being placed on the wearer?

Wiring fresh-cut flowers and foliage has many advantages, as well as a few setbacks. However, it is essential in floral design. Floral designers use a variety of florist wires and wiring techniques to support floral materials in attractive designs. Practice and experience help each designer determine which wiring technique and gauge of wire work best in designing and constructing various types and styles of floral designs.

TO WIRE, OR NOT TO WIRE?

Traditionally, floral designers wire flower and foliage stems when constructing corsages, bud vases, and many other types of floral arrangements. However, floral designers often ask themselves if wiring the stems of fresh-cut flowers and foliage is actually necessary. With today’s technology of improved plant cultivars, effective processing and handling techniques, and contemporary styles of glass vases and containers, wiring flowers is most often not necessary.

When pierced by wire, fresh-cut floral materials sustain injury and dehydration. They also become susceptible to bacterial invasion. All of these conditions decrease the longevity or vase life of the plant materials.

Wiring fresh-cut floral materials also increases labor and design time, which leads to an increase in the cost of the arrangement. Additionally, as the wire beneath the water level rusts, it leaves a mineral deposit on the inside of the container. This appears as a cloudy film on the inside of a glass container, thus detracting from the appearance of the design.

* Underlined words are defined in the Glossary of Terms.
On the other side of the design table, many reasons exist for wiring flowers. In floral arrangements, wiring protects brittle stems in transport, keeps flower stems upright, and provides support for heavy flower heads. Wiring also functions to straighten slightly crooked stems.

Wiring is essential in the construction of body flowers. It allows the designer to create stems for individual florets and serves to replace natural stems that would otherwise be too bulky and heavy. Wiring also allows the designer to maneuver stems easily into place and hold them in a desired line. Wiring provides support and keeps flowers in place while they are worn.

Wiring is also functional in designs with decorative botanicals. Most decorative botanicals consist of plastic-coated wire stems. However, floral designers use additional wire to bunch small clusters of flowers together, lengthen or create new stems, and attach accessories to the design.

**BALING WIRE, BARBED WIRE, ELECTRICAL WIRE, OR FLORIST WIRE?**

With a variety of wires to choose from, which one does a floral designer select? For floral design, a variety of florist wires exist, made specifically for the floral industry.

Florist wires range in weight and thickness – heavy and thick to light and thin. Wire gauge is the measurement or industry standard used to indicate wire thickness. Florist wire gauges range from 16 to 32. The higher the gauge number, the thinner and lighter the wire.

The wire gauge a floral designer selects depends on the size and weight of the plant stem and flower head, the purpose for which the wire is used, and where in the design the flower will be placed. An important consideration in corsage work is to use the finest wire gauge possible to support the plant material and to reduce the overall weight of the design.

Two types of florist wires are available – green wire and silver wire. Green wire has an enamel coating that prevents rusting and blends with the natural color of flower and foliage stems. Silver wire, often referred to as bright wire, is used primarily in corsage work where it is concealed with corsage tape.

Florist wires are available in boxes of either 12-inch or 18-inch lengths. Florist wires are also available in continuous lengths on spools or as paddle wire.

**WIRING TECHNIQUES STANDARDIZED FOR SUCCESS**

Floral designers use a variety of methods to wire flowers and stems. The wiring method a designer uses depends on the type of flower, the type of design, and the personal preference of the designer.
Several considerations are important when wiring flowers and stems. One consideration is to select the lightest gauge of wire necessary to properly support the plant materials in the design. Another consideration is to blend the wires into the design so they are invisible and hardly noticeable. Avoiding multiple twists of the wire down the stem of plant materials reduces excess bulk and weight.

In corsage work, wires laid parallel to the stem create less bulk and require less design time. With container designs, only two to three twists of the wire around the stem are necessary to support the stem and keep the wire flush to the stem so it is almost invisible.

Throughout the years, floral designers have developed numerous methods and techniques for wiring flowers and stems. Floral designers may know these wiring techniques by multiple names. However, in recent years, the American Institute of Floral Designers (AIFD) has standardized these techniques in the *Book of Floral Terminology*.

**Bracing** is a wiring technique in which the floral designer places a floral-taped wire loop underneath a large delicate blossom or foliage for support. This is an effective method for providing support to flowers such as Gerbera daisy in floral arrangements.

Floral designers use **extension wiring** as a technique for securing clusters of delicate flower stems. This technique, also referred to as clutch or wrap-around wiring, is especially successful with small, individual dried flowers inserted into the foam as a group. Extension wiring is also practical for grouping small clusters of tiny mass flowers such as *Gypsophila* in corsage work.
Feathering, or frenching, involves dividing or separating a flower into small components and reassembling them to resemble a smaller version of the original flower. Floral designers use this wiring technique with carnations as well as with Gerbera daisy and bird of paradise flowers.

The hairpin technique is a method for wiring foliage and delicate, tube-shaped flowers. The designer bends a thin wire at its midpoint to create a narrow, hairpin shape. He/she then passes the hairpin-shaped wire through the lower leaflets of the foliage and allows the wire to lay parallel to the stem of the leaflet.

Before inserting a hairpin-shaped wire into a tube-shaped flower, the designer places a small piece of moistened cotton into the crook of the hairpin wire. Carefully, he/she inserts the ends of the hairpin wire into the tube of the flower and allows the ends to exit the base of the flower near the stem. The designer then gently pulls the ends of the wire until the small piece of cotton becomes firmly held in place against the inside of the flower.
Floral designers use the **hook wiring** technique to secure and support daisy type flowers in corsage work and other designs. Some floral designers also use this technique with stephanotis and freesia.

Using the hook wiring technique, the designer bends the tip of the wire to create a small hook. He/she then inserts the longer end of the wire into the center of the flower and gently pulls the wire down into the flower until it is practically hidden. Care must be taken to not pull the wire too hard, which will break the flower head.

![Hook Wiring Technique](image)

**Insertion** is the wiring technique floral designers use to support and reinforce flowers such as carnations and roses that have solid stems. Designers also use this wiring technique to support bulb flowers with hollow stems such as tulips, irises, daffodils, and hyacinths.

For solid-stemmed flowers, the designer inserts the end of a wire into the calyx of the flower. With one hand at the base of the flower head and the other hand on the wire, the designer then rolls the flower stem between the fingers of the top hand and into the wire, twisting around the stem only a few times. The designer then turns the wire end up and wraps the wire around the stem in the opposite direction to secure it in place.

![Insertion Method for Wiring Solid-Stemmed and Hollow-Stemmed Flowers](image)

To support hollow-stemmed flowers using the insertion wiring technique, the designer inserts the wire into the bottom of the stem and upward to the base of the flower head. The designer gently pushes the wire against the calyx until the wire is firmly in place. He/she must be careful not to force the end of the wire through the flower. Cut any wire that extends below the base of the stem.
Designers use the **piercing technique** to wire flowers such as carnations and roses that have large, thickened calyxes. In using this technique, a designer inserts a single wire through the calyx, midway from the base of the calyx to the petals. After centering the flower head onto the wire, the designer bends the wire downward, placing it parallel to the natural stem end. Designers use this wiring technique when constructing boutonnieres and corsages with carnations and roses.

![Piercing Technique](image1)

**Cross piercing** is a wiring technique used to support heavy blossoms, and also for wiring roses and orchids for corsages and boutonnieres. Cross piercing involves inserting two wires perpendicularly through the flower calyx and bending them downward and parallel to the stem.

**Stitching** is the technique for wiring foliages used in body flowers. Designers also use this wiring technique for controlling large specimen foliages in floral arrangements.

![Stitching Technique](image2)

Stitching involves inserting a thin wire through each side of a leaf such that it crosses the midrib. Working from the backside of a leaf, the designer makes a stitch under the midrib about \(\frac{1}{2}\) the way up from the base of the leaf. Only a small stitch shows on the front side of the leaf. The designer bends the two ends of the wire downward and parallel to the stem. After taping the wire to the stem, the designer can curve the leaf if desired. The wire functions to hold the leaf in the curved position.
AFTER THE WIRING, WHAT’S NEXT?

After wiring flower stems and foliages, a floral designer uses floral tape or stem tape to conceal the wires. The tape also helps preserve moisture within the plant material.

Floral tape consists of wax-coated paper that becomes self-adhering when stretched. Floral tape is available in numerous colors; however, the most often used color is green because of its blending qualities. Brown is a popular color for use with dried materials; other colors are frequently used in silk corsages.

To tape a wired flower stem, first place the flower stem in the left hand and the tape in the right hand. Stretch the tape so it will adhere to itself. Twist the flower stem with the left hand and pull and stretch the tape with the right hand. This will create a smooth floral stem for use in corsage designs and other types of floral arrangements.

SUMMARY

Florist wire is an important mechanical aid used by florists in the construction of many types of floral arrangements, especially corsages and boutonnieres. Wiring fresh-cut flowers and foliage has many advantages, as well as a few setbacks. However, it is essential in floral design.

Properly processed flowers with sturdy stems usually do not require wiring for placement in vase arrangements. However, when needed to hold an arrangement or body flowers together securely, wiring should exist as an almost invisible mechanical aid.

Floral designers use a variety of florist wires and wiring techniques. The designer selects the wiring technique and proper wire gauge proportionate to the flower or stem being supported.

After wiring, floral tape wrapped around the stem and wire helps hide the wires and preserve moisture within the plant material. Proper wrapping creates a smooth floral stem for the designer to use in corsages, boutonnieres, and other types of floral arrangements.
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REFERENCES

The references listed below were used in the development of this topic and can be researched for additional information. References indicated with (1) were consulted and permission for use was given.


Benz, Buddy and James L. Johnson. *Flowers: Geometric Form*. College Station, TX: San Jacinto Publishing Company, 1986.1


GLOSSARY OF TERMS

Definitions for terms in this glossary are taken from *Book of Floral Terminology*, developed by the Education Committee of the American Institute of Floral Designers.

**American Institute of Floral Designers (AIFD)** – An organization of professional floral designers established to recognize and promote the art of floral design as a profession. Members of the organization serve as a standard for professionalism and inspire and nurture excellence in the field of floral design.

**Design mechanics** – Materials and techniques a designer uses to position and hold plant materials in place in a floral arrangement.
Floral tape – A narrow, waxed crepe paper tape that sticks to itself when stretched. Also known as stem wrap, it is used to wrap floral wires, bind materials, and assemble corsages and wedding bouquets.

Florist wire – Long, thin threads of metal manufactured in various thicknesses or gauges. Florist wires are commonly available in gauges ranging from 16 (heaviest) to 32 (finest), and lengths of 12 and 18 inches, or on a spool or paddle.

Stem support materials – Items such as floral foam and dry foam that are used to hold and secure the stems of plant materials in place in a floral arrangement.

Wire gauge – The measurement used to determine the thickness of a wire. Wire gauge ranges from 16 to 32. The larger the gauge number, the thinner the wire.

Wiring technique – The use of florist wire to support and reinforce, in a visually unobtrusive manner, floral stems and flowers to be used in floral arrangements.

BRAIN PROBES

SHORT ANSWER/LISTING: Answer the following questions or statements in the space provided or on additional paper.

1. Describe the advantages and setbacks of wiring fresh-cut floral materials to be used in floral designs and arrangements.

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2. Define wire gauge. What is the heaviest gauge of florist wire? Which gauge is the thinnest? What considerations help a floral designer determine which gauge of wire to use?

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3. Name five wiring techniques commonly used in floral design.
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4. Explain how to wire a flower stem using the hook wiring technique.
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5. Which methods of wiring would a floral designer most likely use to support:
   a. tube-shaped flowers: ____________________________
   b. tulips and daffodils: ____________________________
   c. carnations and roses: __________________________
   d. orchids: ____________________________
   e. chrysanthemums and daisies: __________________
   f. camellia leaves: ____________________________
   g. leatherleaf fern: ____________________________
6. Explain the role of floral tape in wiring flowers and foliage.

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7. Describe how to properly wrap a wired floral stem with floral tape.

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FILL IN THE BLANK: Complete each statement with the correct word or phrase.

8. ______________________ is the wiring technique in which the designer inserts the end of a wire into the calyx of a flower such as a rose or carnation and wraps the wire downward around the stem.

9. ________________________________ involves dividing or separating a flower into small components and reassembling them to resemble a smaller version of the original flower.

10. In using the ________________________________ technique to wire flowers, a designer inserts a single wire through the calyx of a flower, midway from the base of the calyx to the petals, and bends both sides of the wire downward to position it parallel to the natural stem.

11. ______________________________ is the wiring technique in which the floral designer places a floral-taped wire loop underneath a large delicate blossom or flower for support.

12. Using the ________________________________ wiring technique, the floral designer bends the tip of a wire to create a small hook, inserts the longer end of the wire into the center of the flower, and gently pulls the wire downward into the flower until it is practically hidden.

13. Floral designers use the ________________________________ technique for securing clusters of delicate flower stems as a group.

14. ________________________________ is a technique for wiring broadleaved foliages in which the floral designer inserts a thin wire through each side of a leaf such that it crosses the midrib vein of the leaf. Only a small part of the wire shows on the front side of the leaf.

15. ________________________________ involves inserting two wires perpendicularly through a flower calyx and bending them downward and parallel to the flower stem.

16. The ________________________________ wiring technique provides additional structural support and involves bending a wire into a hairpin shape and inserting it into a flower or leaf.
CONCEPTS TO CREATIVITY

- Select several 18-gauge florist wires and a roll of floral tape. Practice taping each wire to create a wrapped wire that is smooth, tight, and uniformly covered.

- Collect leaves from trees and shrubs. Practice wiring them using appropriate wiring methods.

- Collect stems of native flowers. Wire them using the various techniques and methods of wiring.

- Make an identification card with wire gauges on it from 16 to 28. Use the card as a study aid.

- Construct a display for the classroom that shows the different gauges of floral wire.

- Make a holder for the different gauges of floral wire using segments of PVC pipe, plastic pipe, or cardboard paper towel rolls.

- Gather a variety of foliages from around your home and school. (Avoid collecting the tender tip growth of shrubs in the spring.) Condition and harden the foliage collected. Wire and tape each type of foliage. Place some of each type of foliage in the floral cooler. Place a similar amount of each type of foliage in a location in the classroom. Take additional leaves of each type and spray with an anti-transpirant. Place some of the sprayed leaves in the cooler and some in the classroom. Over the course of the next several days, observe and develop conclusions about the longevity of the different foliages, the use of an anti-transpirant, and their adaptability for use in corsage work and other types of floral arrangements.

- Use wire and tape to prepare floral materials for a floral arrangement.

- Visit a local florist. Have the florist demonstrate the different methods of wiring flowers and foliage for floral arrangements.

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