



Tips for avoiding glass breakage in framed artwork.

Each year, we replace 100's of broken glass panes in anything from fine art to posters and family photos. Unfortunately, many of these pieces have suffered irreparable damage from improper framing, mishandling and inadequate packaging or hanging methods.

Glass is technically a liquid and once a chip occurs, it will find the path of least resistance to break and that's usually across the surface of your art. Obviously, there are a lot of causes for this that we can't control like simply dropping the art, natural disasters, and other acts of God(or kids and pets). But there are some pre-emptive steps you can take To avoid these problems. Here are some things you should avoid and other recommendations when framing or displaying your artwork.

I. Framing (or in this case, under framing)

Many of the basic causes of glass failure have to do with how the artwork was originally framed. Under-framing a piece of artwork accounts for a large percentage of breakage issues. Whether you're using a clip frame (uniframe), a small metal moulding or a thin, minimal contemporary wood frame, flexibility is the greatest enemy to your picture frame glazing.

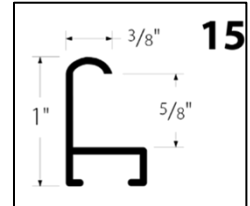
A. **Clip frames-** The "Uniframe" idea was developed to create a frameless look on contemporary art and documents. The glass is secured to the art by a series of metal or plastic clips tied together with strings or small springs in the back of the art.

1. We don't recommend these for wall-displayed artwork simply because of the elastic nature of the tensioner strings which inevitably stretch over time, releasing the glass and damaging the art.
2. The other problem with these systems is the plastic clips that tend to become brittle(due to outgassing) and often fail.



B. Small metal frames- Although metal frames are technically stronger per inch than small wood frames, they are still quite flexible and can bow out with the weight of the framing materials. These are also typically joined with corner angles which can loosen with added weight, causing the spring clips to dislodge and create tension on the glass.

1. On most small metal frames, there is less than 1/8 of an inch of aluminum on the outside wall of the frame. We sell a lot of metal frames in our shop, but we strongly encourage our clients to step up to double wall metals or larger profiles on pieces over 24" x 36."
2. Nielsen makes a huge variety of profile shapes, colors and finishes that will safely accommodate your project while maintaining a minimal profile and incursion to the art. There's no need to sacrifice integrity of the framing to achieve a contemporary style.
3. I will cover more about the best ways to use, display and transport metal-framed art in the next sections.



C. Small or Soft-Wood Frames- Wood frames have the greatest number of variables in the design process. Smaller frames, especially Softer woods, are simply not strong enough to secure larger, heavier projects. If they are smaller than one inch in total width, they may need to be supported to hold up.

1. Most wood (and metal) frames have a 1/4" lip or rabbet which holds the glazing in place. If a frame is less than 7/8" wide, the actual material supporting the art and carrying the weight is less than 5/8." If the wood itself is not strong enough, bowing or warping can occur or the screw holding the d-ring hanger can break out and can cause glass breakage.
2. Many of our contemporary mouldings being produced today are created with softer woods to allow for greater detail in the profile(carving, designs, and foil over-layment), to cut down on the total weight of the framing and to diminish the use of hardwoods which have contributed to deforestation.
3. Designing with minimal profile wood frames should be handled with caution and consultation with a picture framer for the best advice. Many times, these frames can be gusseted or supported in ways to make them more stable, but it's always better to start with an appropriate size frame to fit each project need.



3/4" frame has 1/2" actual wood in the body of the frame

TIPS:

When using smaller frames(metal or wood), it's best to:

- 1. Choose a moulding profile that can adequately support the weight of the entire framing package.**
- 2. Make sure that the hanging system used is secure and adequate for the weight and size of the artwork without putting undo stress on the frame itself.**
- 3. Avoid the use of single sawtooth hangers that pull upward on the center of the top frame rail .**
- 4. Avoid using a wire on larger, heavier pieces(mirrors, shadowbox designs, etc.) that might pull inward or flex frame with tension.**

✓ On larger artwork, you might consider using acrylic glazing(plexiglass), lamination(open edition art only) or simply opt for larger, stronger frame to make sure that your art stays on the wall where it belongs.

II. Shipping & Handling

Of the many glass replacements we do each year, this is one of the leading causes of damage to artwork. From improper packaging to careless movers, there are any number of horror stories that are written every day about transporting art. You can't always afford to hire someone to build museum crates for every piece of art you own but it helps to know best practices for preparing art for shipment to avoid pitfalls.



- A. Whenever possible, trust the professionals to package your treasures. A good shipping agent will know how to deal with art if it has glass involved. Ask your shipping professional about the best way to ensure safety with each piece and always insure your shipment (because stuff can still happen to the best packaged artwork). There are also boxes designed for shipping art that you buy from moving and shipping companies that can help to secure your art cut down the time and expense of packaging.
1. In general, overpackaging is better even if it adds to the cost of shipping. Frames, matting and other elements in the design can be damaged without significantly affecting the art but shattered glass is almost always fatal.
 2. We recommend the use of stiffer foam board, Masonite, or other plastic based products on the glazed side of the art as a barrier inside the package. Cardboard is simply not impact resistant enough.
- B. Whenever possible, remove the glass prior to shipment or transport on pieces larger than 18" x 24." We try to do this before we ship anything from the gallery as a safety precaution. Keep in mind that as artwork size increases, so does the flexibility of the frame and the surface area of the glass. Most of the damage that occurs in shipment are glass related injuries.
1. In most areas, you can find a local framer, craftsman or hardware store that can provide you with glazing once the artwork arrives at its destination. If you are selling the artwork to someone, it's better to take a few dollars off to compensate that cost rather than risk the artwork.
 2. About half of the breakage we see in shipping situations is not actually caused by impacting the center of the glass but by the art being dropped on a corner. This causes a ripple effect in the glass which can star from the point of impact and travel across the surface.

C. Vet and get to Know your moving people. Are they experienced in moving art, bonded, and insured and most of all trustworthy? Many moving companies do not have good track records when it comes to more fragile items and others don't stand behind their services well when things are damaged in transit. You want all your possessions to arrive safely but fine art, family photos and keepsakes are among the least replaceable items you have.

1. Seek out LOCAL reviews for packaging and moving companies rather than national reviews. Not all companies maintain the same standards in every area of service. Yelp, Angie's, and even Facebook groups can be good indicators of client satisfaction.
2. Check to make sure that the companies you use are bonded and insured to cover damage or loss of items. On your end, make sure they know the value of any collectible items, artwork, or other things of value with a printed inventory list. It's also a good idea to let your renters or homeowner's insurance agent know that you are moving or shipping the items.

TIPS:

If you are packaging your own artwork for moving or shipping:

1. **Over-package the artwork.** I usually recommend the use of corner protectors on the frame + at least two layers of bubble wrap, three layers of cardboard on each side (if not a harder foam or other board), resulting in at least 2" of packing all around the artwork.
2. **It's worth the investment to pay for oversized shipping rather than trying to minimize your packaging to save money.**
3. **If you're shipping it yourself (UPS, FED X, etc.), make sure that they know it's artwork and declare a value for insurance.** Many shippers have outside insurers for valuable items, so make sure you're covered.
4. **If possible, avoid shipping express or overnight as these faster methods lend themselves to mis-handling down the road. Faster is not always better.**

III. Hanging your art

Of course, once you've framed your art and moved it to your environment, now you have to hang it up on the wall. Improper hanging can also be a major source of damage when it comes to glass. If just dropping your art can cause damage, just imagine what a fall from 5-6 feet up can do (especially when falling onto hard surfaces or onto other furniture).

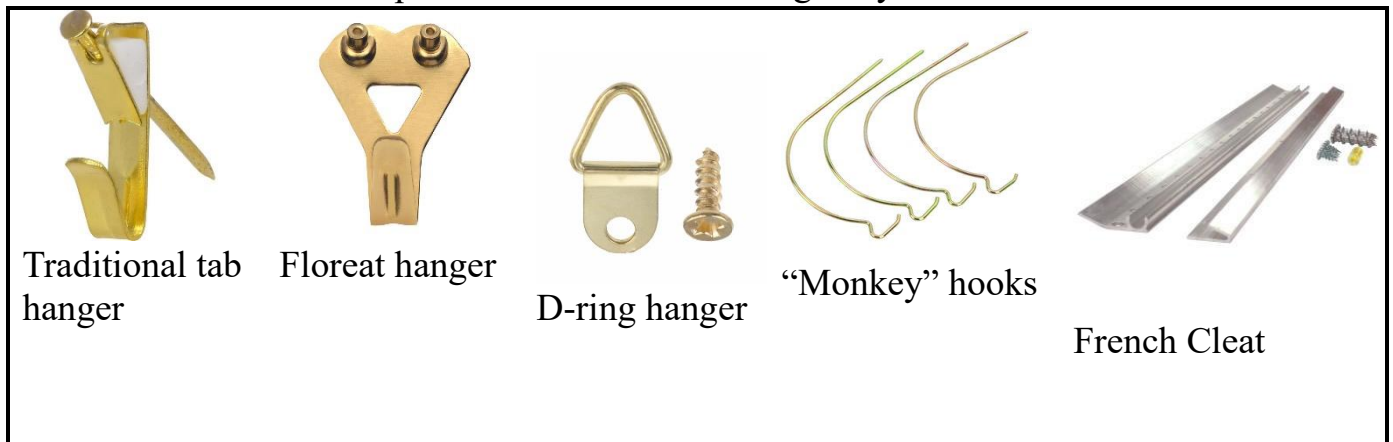


Before I get into some of the best hanging practices, let me say that no hanging system is flawless. There are still accidents and Acts of God that can plummet your art towards the floor. There are a lot of different hanging systems and products that are possible for your artwork. The challenge is to know when, where and how these products should be used.

- A. To avoid glass breakage in larger or heavier art, avoid using the aforementioned sawtooth type hangers. They put undo tension on the center and top of the frame resulting in bowing or flexing of the frame. As a general rule, we don't use these on pieces over 11 x 14 or 5 to 10 pounds. We have wall buddies for frames which attach to the top corners that allow you to hang from single nails or screws and are more secure than traditional sawtooth hangers.
 1. Caution- If you hang your art from sawtooth hangers on a single nail you always risk the art jumping off the nails or screws if there are vibrations such as banging on the wall,
 2. When using this method, always pound the nail at a 45-degree downward angle for strength. When using 2 sawtooth hangers, carefully measure for leveling and distance between the centers of the sawtooth to make use the art can be seated on the mails or screws.

- B. Most pieces of art can be better secured using a picture wire attached to two or more D-ring hangers. We have several different weights of wire along with lots of D-Rings to choose from. Once the wire is secured properly, the use of a traditional tab wall hanger, "monkey hook" or molly-screw insert works best for hanging.
 1. Caution- follow the recommended weight allowance suggested on the hanger package. Use two hangers for better balance on larger artworks to keep them from shifting on the wall.
 2. When using a tab hanger or other nail hangers, make sure to pound in the nails at the suggested 45-degree angle for strength. Do not put the nail in straight.
 3. Again, when dealing with a smaller frame moulding, it might be better to hang them from the d-rings themselves putting the weight on the side rails rather than having the wire put tension toward the center. Often, this results in breaking out the inside of the moulding or popping the glass out.

- C. Heavier and large-scale artworks should either be hung directly from the D-ring hangers or by use of a wall cleat of “French cleat” system spanning at least 75% of the top width of the frame.
1. Usually, it’s best to hang the D-rings from screws or wall anchors for strength. They are also much easier to measure for leveling and spacing than using other methods.
 2. It is important to use a wide span of any cleat system to avoid the bowing or flexing caused by a center mount(as in the sawtooth hanger system).
 3. Always have assistance when hanging this type of artwork to avoid accidents and to make sure the artwork is properly seated on the hangers.
- D. Special Situations like lathe and plaster walls, specialty textured surfaces, masonry and other wall types may require special hangers, cove moulding hooks or other methods for displaying your artwork. To make sure that you are getting the most secure hanging systems, consult a local framer or even a contractor to prevent loss of art or damage to your walls.



TIPS:

To hang art securely in your home or office...

- 1. Make sure that the hanging system (wire, cleat, etc.) is firmly attached to the back of the artwork and that the wire is wrapped securely around the d-ring or other hanger. Wires that are frayed, too small or loose should be replaced**
- 2. Measure twice, install once! It's best not to weaken the wall surface by pounding numerous holes in the area where you're hanging the art. A good rule of thumb is to place a plain brown paper sheet cut to the size of the art on the wall to get placement before nailing or screwing in the mounting hardware.**
- 3. Use an appropriate hanger for the weight and size of the piece. Larger or wider pieces may require two or more hangers, a D-ring suspension with molly screws or a cleat hanger to support the weight and hold the art level. Most packages of these hangers will tell you the approximate limits.**
- 4. When using a nail-based hanger, always hammer it in at the angle suggested by the hanger itself (about a 45-degree angle). Follow the manufacturer's suggestions on other types of hangers.**

These pre-emptive measures can help to prevent the loss of artwork due to glass breakage. If you do experience glass breakage in your artwork, take precautions when attempting to remove loose glass from the surface of the piece. Use gloves and try not to slide the edges of the broken glass onto the art surface, matting or your fingers.

Once you have removed any loose particles tape over the remaining broken glass surface to hold the glass in place for transit. Wrap the piece in a towel or blanket and try to lay it flat to avoid having more of the glass break or shift while moving it. Our best advice is to take it to a local framer for repair rather than attempting a DIY fix.

Treat your Art like a member of the family (or better).

Brent Allen- Owner/Manager