

Care and use of 19th-century American gilded picture frames

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Picture frames are a component of most art collections and are subject to wear and tear in their functional role surrounding paintings. Damage to frames occurs during exhibition, storage, and travel, and is caused by handling, hanging processes, adverse environments, neglect, and irreversible restorations. Picture frames are maintained by a variety of preservation specialist and their preservation interests have only rarely been addressed.

The following is Section 4 of a larger paper, “A Description of 19th-Century American Gilded Picture Frames and an Outline of their Modern Use and Conservation,” presented in June to the Wooden Artifact Group at the 2006 annual meeting of AIC in Providence, Rhode Island. This section addresses general preservation, handling and preparation of frames for exhibition.

Environment Gilded wood objects are ultra sensitive to environmental conditions and are probably more sensitive than most paintings. Gilded wood in adverse climates experiences detachment and loss of gilding/ornament, while the accumulation of grime leads to surface darkening and cleaning campaigns that may well cause damage.

The protected bright gilding that survives on shadow boxed frames of the second half-century illustrates how more exposed gilding has now been altered by grime, abrasion, and staining from moisture and grease during handling.

Handling All gilded objects should be handled with non-marring gloves to avoid abrasions and staining, and even paper towels or cotton cloth will suffice. In practice, however, gilded frames are still handled with bare hands as the frame is considered a safe means of handling the artwork. Other handling precautions include using soft support pads, not lifting empty frames by the thin sight edge, and avoiding contact with loose parts. Ziploc-type bags labeled with marker pens are useful for saving detached parts.

Dusting Occasional dusting of frames with a clean soft brush and vacuum is recommended to remove the dust that eventually becomes grime that attracts moisture. [See Fig. 1 on the following page] Light-weight dust covers can help in dustier storage areas, e.g. clear 0.35 mil (9 mm) polyethylene. Over-zealous dusting results in progressive abrasion that removes the gold and reveals the bole and gesso preparation layers, and varying degrees of this condition are very common. Aqueous cleaning results in the removal of water gilding and toned coatings and this is also a common condition.

Complete descriptions of conservation services and rates are available on the WACC Web site. For information, visit: www.williamstownart.org



Figure 1



Figure 2

Hanging hardware The early 19th-century hanging device was a ring and screw combination located singly or as a pair in the top rail. Simpler early devices included wire, leather, and sheet metal loops, located in the top rail, while some rural portraits were not framed and the loop device is found on the stretcher. Paired screw eyelets located in the side rails were popular after about 1825, and heavier frames could have custom hardware. [Fig. 2]

Modern practice is to fit steel D-rings for hanging, Oz-clips for some crating, and mending plates for securing the artwork, mostly with pan-head sheet-metal screws. Secure fittings reduce the incidence of repeated screw holes, but events can lead to new holes in the frame and stretcher backs, and care is necessary to avoid excessive holes or obscuring historic evidence. A direct-reading caliper is useful for optimizing the length of screws added to a frame. Redundant early hardware can be preserved on the frame, or separately if necessary.

A heavy-duty hanging scale was used to crudely measure the failure point of a common D-ring with a stand-up wire loop (item U711, United Manufacturers Supplies Inc.) [Fig. 3]. The wire loop failed by unwinding from its strap at around 520 lbs., despite the strap being fixed with only small screws in softwood (No. 8 x 1 in. screws in sugar pine). With safety margins that include an allowance for one hanger to temporarily hold the whole weight, perhaps 150 lbs. is a reasonable maximum loading for a pair of these D-rings. Most framed paintings weigh less than 150 lbs., even when they are fitted with laminated safety glass. A record of the weight of heavier objects can be useful, as would further load tests of hanging devices. Old braided steel wire corrodes and becomes brittle and should be replaced with a stainless type. A single wall fixing combined with a connecting wire on the back of the frame is less secure than two wall fixings, with one for each D-ring. Failures within the hanging arrangement can be disastrous.

Labels Frame makers can be identified from the occasional inscriptions found on the frame back. These can be printed paper glued on the wood, pencil inscriptions, and late-century marks applied by carving, ink stamp, and engraved metal coupons. [Fig. 4] A selection of late century marks are illustrated by Smeaton (1988), and many New York and Boston makers have been recorded by Katlan (1987). Other frame back inscriptions record dimensions, style, owner, and hanging location, etc.

Ideally, owner records should include copies of maker's labels/marks since they are fragile and subject to loss. Surviving labels can be protected in place with an overlay of 5 mil (0.127 mm) Mylar attached with double coated tape (3M 415) on an isolation layer (B72), and detached labels can be encapsulated in Mylar.

Exhibition labels have traditionally been placed on frame and stretcher backs. A less intrusive and longer lasting location is on the painting's back-board encapsulated in Mylar, and/or placed in the owner's records. Modern inventory marks are applied between soluble varnish coatings to

a discreet part of the frame, usually an outside corner and/or the back. Troublesome old inventory labels include gummed paper on water gilding, and pressure adhesive labels or masking tape on oil gilding.

Gilding that has been covered with a title plate is usually better preserved than adjacent surfaces and indicates an earlier condition. The silhouette revealed when plates are removed may need to be masked with pigments. The introduction of new title plates will eventually result in the same irregular coloring to the gilding.

Rebate modifications Frame rebates are sometimes modified to improve the fit of a painting. When an aperture is too large to neatly and safely house a painting the sight size can be reduced by fitting flat or L-section wood slips (or a liner) within the rebate. Mitering the ends of the slips is often sufficient to hold them in place, rather than adding fasteners or adhesive. L-section slips can double-serve by also centering the painting. Whether to only paint the reveal of the new slip, include a cavetto profile, or gesso and gild the reveal with oil or water gilding, depends on the frame's existing gilding quality and the extent of the reveal. Linen covered liners were popular in the second half of the 20th-century and they can be original to a 20th-century frame, but they are a later addition to a 19th-century frame and were added to modify the sight size.

A keyed-out stretcher or a larger painting can require the widening of the rebate. Wood may need to be removed with a sharp chisel or router, although this obviously involves the loss of original material and detail.

Strips of polyester felt tape with an adhesive backing (e.g. Decco tape) are now generally fitted to rebates to cushion the edges of the painting. Attachment of the felt is improved by first dusting the rebate with a brush, and/or coating it with thin varnish (e.g., B72, shellac).

Glazing Glazing is added to frames for the protection of artwork, generally for specific exhibitions and travel. Modern glazing materials are light-weight thermoplastics (acrylic or polycarbonate) or heavier-weight laminated glass, and most have proprietary coatings to reduce UV light and reflection. A glossary of glazing terms and a comparison of glazing materials are available as technical leaflets on WACC's website. Glazing is fitted in the rebate (or in front of a liner) and is backed with dark colored and felted wood or acrylic spacers. The increased protrusion of the painting in the back can be enclosed within an added build-up (see below).

Microclimates Sealed microclimate enclosures are used to stabilize environmental influences during exhibition and travel. The history, development, and design of various enclosures have been described in recent literature: e.g., Kamba (1993); Richard (1995); Wadum (1995); Sozzani (1997); Phibbs (2002). The painting is enclosed behind glazing within the frame (or travel frame), or larger enclosures such as vitrines can also include the frame.



Figure 3



Figure 4

Sozzani demonstrates that the moisture content of wood within the enclosure (i.e. stretcher, panel, cradling, interior frame and build-up, etc.) helps control RH during temperature variations, and a silica gel component can be a hindrance. The method described uses gaskets fitted between the glazing and rebate, and between the back of frame or build-up and an aluminum sheet backing, plus additional seals as needed.

Phibbs describes a simple method that uses a single piece of Marvelseal covering the object's back and sealed to the front edges of the glazing with double coated adhesive tape. Phibbs also describes a more labor intensive method that involves two pieces of Marvelseal per edge, bonded to the front and back edge of the glazing with hot melt adhesive, and folded and heat sealed over the painting's backboard.

Factors influencing the choice of microclimate method include size, weight, shape of the packaged artwork, rebate size of the frame, the exhibition environment and duration, and individual preferences. A small data logger enclosed within the envelope can give an after-event assessment of temperature and RH.

Build-up A build-up is an addition on the frame back that extends the rebate's depth to improve the housing of protruding artwork. A build-up is usually made from four pieces of straight grained and light-weight wood (e.g. sugar pine, tulip poplar), 0.5-1.5 in. deep, and attached to the frame back with a minimum number of woodscrews. Joining the corners of the build-up with splines or lap joints adds useful support to the frame's own corner joinery, and beveling and painting the outside perimeter reduces visibility. A build-up for an oval or round frame can be prepared from birch plywood cut to a circle with band saw and jig saw. Reasons for adding a build-up include protecting the back of protruding artwork, as a component of glazing and microclimate set-ups, and as a support for failing frame joinery. Build-ups do push the hanging object away from the wall, but they also hold hardware and can provide an insulating air space behind. ❏

The complete paper, with notes, references and supplier's list, is available at www.williamstownart.org/publications.htm

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