

Care and use of nineteenth-century American gilded picture frames

By Hugh Glover

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Overview

Picture frames are a standard component of museum collections and subject to wear and tear in their functional role surrounding paintings. Damage to frames occurs during exhibition, storage, and travel, the result of handling, hanging processes, adverse environments, neglect, and irreversible restorations. Picture frame maintenance is an important but sometimes overlooked aspect of collections management. Frame preservation has only rarely been addressed.

Curators and collectors today are increasingly interested in identifying original, or first, picture frames on paintings. The date of frames can be assessed from their style and manufacturing technology, while shared marks on the stretcher and frame backs can indicate whether a frame is original. It is possible, therefore, to sometimes use the frame information to assist in dating a painting, another important function of the preservation specialist. This article describes some of the fundamental considerations stewards of nineteenth-century gilded frames should understand to best maintain their collections.

Environment

Gilded wood objects are very sensitive to environmental conditions and they are probably more sensitive than most paintings. Gilded wood in adverse climates experience detachment and loss of gilding/ornament, while the accumulations of grime lead to surface darkening and cleaning campaigns that may well cause damage.

The bright gilding that survives on frames housed in shadow boxes of the second half-century illustrates how less well protected gilding has now been altered by grime, abrasion, and staining from skin moisture and grease.

Handling

All gilded objects should be handled with non-marring gloves to avoid abrasions and staining. 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 prepared soft support pads, not lifting empty frames by the thin sight edge, and avoiding contact with loose parts. Labeled Ziploc-type bags are useful for saving detached parts.

Dusting

Occasional dusting of frames with a clean soft brush and vacuum is recommended to remove dust that would otherwise become grime and attract moisture [Fig. 1]. Lightweight dust covers can help in dustier storage areas, e.g. clear 0.35 mil polyethylene. Even a seemingly simple procedure like dusting is best done by someone with experience.

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. An aqueous cleaning results in the removal of water gilding and its toned coatings, and this is also a common condition.

Hanging hardware

The common early nineteenth 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 [Fig. 2], and heavier frames could have custom hardware.

Modern practice is to fit steel strap hangers (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, however, 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 strap hanger with a stand-up wire loop (item U711, United Manufacturers Supplies Inc.). The wire loop failed by unwinding from its strap at around 520 pounds, despite the strap being fixed with only small screws in softwood. With safety margins that include an allowance for one hanger to temporarily hold the whole weight, perhaps 150 pounds is a reasonable maximum loading for a pair of these hangers. Most framed paintings weigh less than 150 pounds, 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 strap hanger. Failures within the hanging arrangement can be disastrous.

Figure 1



Figure 2

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. 3]. 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 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 five-mil Mylar attached with double coated tape (3M 415) on a barrier 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 backboard encapsulated in Mylar, 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 slips, 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 twentieth century and they can be original to a twentieth-century frame, but they are a later addition to a nineteenth-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 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 lightweight thermoplastics (acrylic or polycarbonate) or heavier-weight laminated glass, and most have proprietary coatings to reduce UV light and reflection. 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.

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), and larger vitrine enclosures can also include the frame.

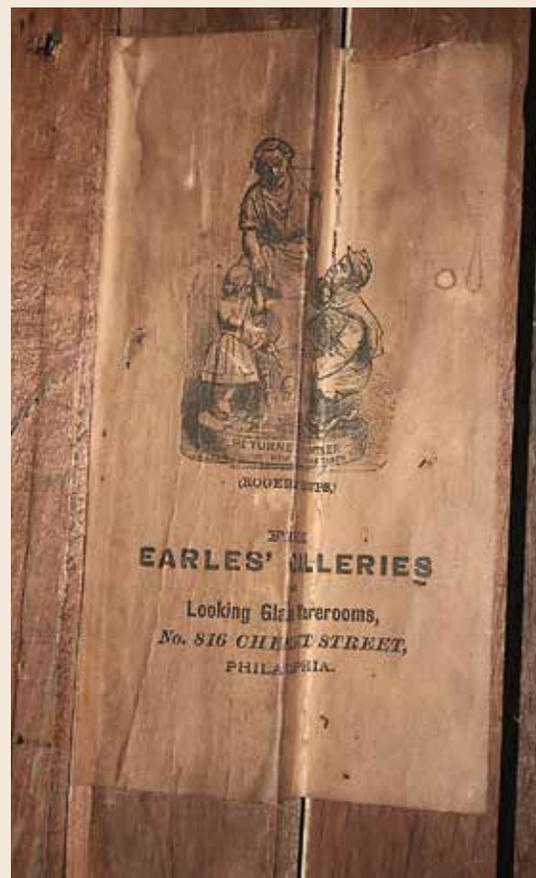


Figure 3

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 (relative humidity) 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 or acrylic 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 Marvelseal, bonded to the front and back edges 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 record the 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 lightweight wood (e.g. sugar pine, tulip poplar), one-half to one-and-a-half inches 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 edge 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 object.



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