

# Preservation Practices



by Hugh Phibbs

## *Framing Potentially Damaging Items with Other Items*

When clients insist on housing materials in a single frame which may affect one another chemically, the accommodations the framer should make for these materials should be tailored to suit the gases each item emits. Woods and some plastics give off acids and peroxides, other plastics give off chlorine, rubber gives off sulfur, and oxidizing metals can contaminate other items that are in contact with them. Each of these materials must be isolated from other items in the frame, but some of them may even need to be

ton rings will be produced by contact between the surface of the glazing materials. The viewer will see only the reflection on the surface of the outer layer of glazing and their visual experience will not be marred by two sets of reflections.

Materials such as rubber or wood may be enclosed in a sealed package without ventilation to the exterior of the frame. The ideal storage condition for rubber items is oxygen-free, but the creation of this sort of atmosphere is complicated enough that most museums would be challenged to maintain it. As

such, preservation framers should not feel obliged to provide this option.

Sealing a rubber item in a frame will at least limit its exposure to atmospheric oxygen and will shield metals, especially silver, from the sulfur that the rubber will emit. The acids and peroxides that wooden

items emit will affect the wood itself, but should not lead to its physical breakdown if the wood is sealed.

The sealed package for these sorts of items should include a support made of conservation-quality board with margins large enough so that heat can be applied to the edges (in order to bond the sealing laminate to the glazing) without any heat reaching the item itself. The inclusion of scavenging materials in the support mat should benefit the enclosed item. These

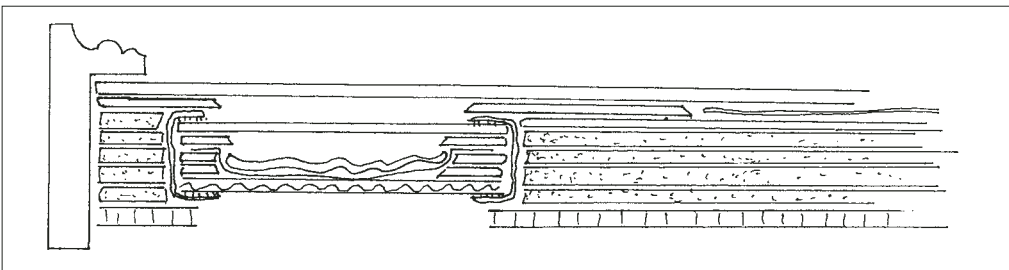


Figure 1: Materials such as rubber and wood may be placed in a sealed package without ventilation to the exterior of the frame. The item can be isolated by being set in a sink formed to its contours and held away from the glazing by a window mat.

ventilated to the outside of the frame to slow their self-destructive potential.

Glass and coated metals are the essential constituents of isolation in framing. When an isolation package is made with glass and metal/plastic laminate, it can be secured in the frame behind a sheet of acrylic glazing. The acrylic will protect the glass from breakage. The matting needed to cover the edges of the package will separate the surfaces of the glazing materials, ensuring that no New-

scavengers can include calcium carbonate or zeolite found in mat-board, copper impregnated polyethylene, silver cloth, or paper impregnated with activated charcoal.

The glass that forms the front of the enclosure can be given a bead of electrical grade, hot melt adhesive so that the plastic/metal laminate film can be bonded to its front edge with heat. Since the package will be held shut with the bonded laminate, the item can be set in a sink formed to the item's contours and held away from the glazing by a window mat, without any further closure necessary. In cross-section, one such package could look like Figure 1.

items are isolated in the frame, the package in which they are enclosed should be made so that any off gassing can only escape out the back of the frame.

Here, the package should be faced with glass, have sides of metal/plastic laminate, and a back of conservation-quality matboard and acid-free corrugated board. The backing board should be open to the air behind the frame. This may entail its being inset in the larger backing board which supports the entire contents of the frame. This package could look like Figure 2.

The vast majority of materials

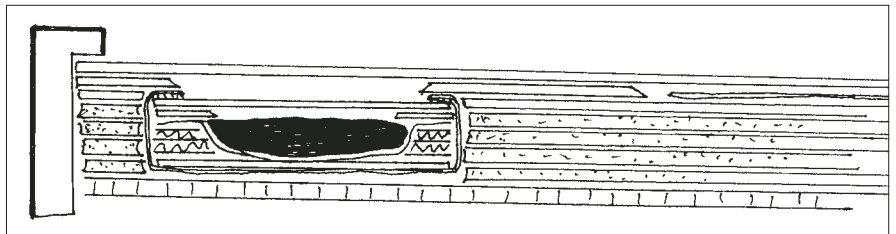


Figure 2: Plastic items that will emit harmful acids need to be both isolated and ventilated to the exterior of the frame. This may entail the item being inset in the larger backing board which supports all the contents of the frame.

Early plastics are a more difficult challenge. Cellulose modified by acetic, nitric, or other acids will produce those same acids over time. These materials have shown a pronounced tendency to self-destruct, and enclosure in a sealed package may aggravate their condition as the acids accumulate and cause further breakdown of the cellulose. These materials are difficult to maintain in the dark and their inclusion in a frame must be discouraged.

If they have to be included, they should be isolated from anything else in the frame and provisions should be made so that their gaseous by-products can safely escape from the frame. When such

presented to framers for framing are chemically stable and the only risk they pose is their potential sensitivity to light. When sports and other memorabilia are proposed for inclusion in a shadow box, the possibility of substitution of a facsimile and storage of the original material in a box should be the first option.

For clients who insist on displaying chemically active items, sealed packages and packages which isolate and ventilate can protect the other items in the frame. However, this cannot ultimately be considered the best preservation setting for the chemically active items. ■