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Article: Housing Glass Transparencies

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## HOUSING GLASS TRANSPARENCIES

Katharine Whitman

As part of the Didactic Negative Project, funded through the Mellon Collaborative Workshops in Photograph Conservation, this paper will describe the design and construction of the housings created for the project. The housings were designed for a set of six collodion negatives, made by France Scully Osterman, and intended as didactic learning tools for the five graduate schools for conservation in North America, and the Advanced Residency Program. The design was evolved at the George Eastman House in Rochester, New York, in collaboration with Kelly Thielen, Juan-Juan Chen and France Scully Osterman.

These housings are aesthetically pleasing, while allowing both transmitted light and reflected light viewing, for inspection of the entire plate, and for easy removal of the plate from the housing. A three-layer rag board design, with Mylar windows, was devised to meet these requirements. It is recommended that black rag board be used because it will hide fingerprints and wear. This design varies slightly from the original project: reinforcing .001" Mylar<sup>®</sup> has been added to a lining paper window and a replaceable Mylar<sup>®</sup> flap has been built into the folder.

### MATERIALS LIST:

4-ply Black rag board  
Black linen tape  
Black lining paper  
Mylar<sup>®</sup> polyester film - .004"  
Mylar<sup>®</sup> polyester film - .001"  
Neodymium disc magnets – 3/8" dia. x 1/32" thick  
3M #415 double-coated tape, 1/2"  
Polyvinyl acetate (PVA) adhesive

### ASSEMBLY PROCEDURE:

1. Cut three pieces of black rag board of equal dimensions. For directional purposes, the boards will be referred to as "a", "b", and "c" (see Figure 1). Board **b** should be slightly thicker than the glass plate to be housed.
2. In board **b**, cut a window that is approximately 1 mm larger on each side than the glass plate to be housed. The plate needs to be easily removable from the housing, but shift very minimally while encased. Cut a half-circle into the right edge of the window. This will serve as a thumbhole in the final housing. Along the right edge, use a cork borer, or other tool, to cut a round hole *halfway through the board* for the inlay of the magnet. A cork borer is an excellent tool for this application because a full set will make precisely the right size hole for inlay of the magnet, without leaving gaps in the surface.

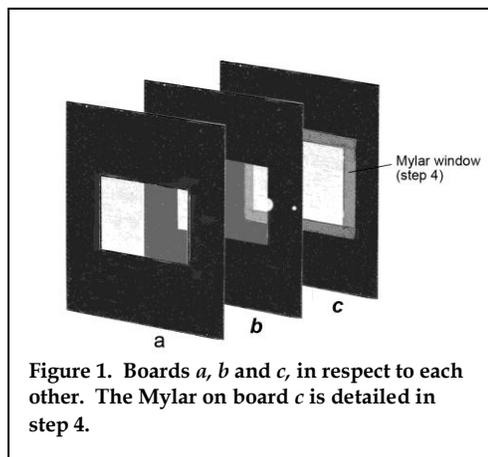


Figure 1. Boards **a**, **b** and **c**, in respect to each other. The Mylar on board **c** is detailed in step 4.

3. Boards *a* and *c* should have bevel cut windows, slightly smaller on the inner edge than the dimensions of the negative. This is easily accomplished by using the window of board *b* as a template: lay it over the board to be cut, and trace around the window opening. The bevel should then be cut towards the center of the board from this outline.
4. Cut a piece of .004" Mylar<sup>®</sup>, about 2cm larger than the window of board *c*. Use 3M double-coated tape to affix the Mylar<sup>®</sup> over the window, bevel side out (Figure 2). Apply PVA adhesive to the perimeter of board *c* and affix to it board *b*, assuring that the windows are aligned and that the thumbhole is to the right; allow this to dry under weight. This new board will now be referred to as "*bc*".
5. In board *a*, make a hole *halfway through the board* for the inlay of the second magnet. The positioning of this hole should complement the magnet in board *bc* as closely as possible. Do this either by measuring the position, or by laying board *a* next to board *c* so they are bevel side down, then simply estimate the position of the second hole (Figure 3).
6. Inlay the magnets into the holes, taking care that the North and South poles will be adjacent when the folder is closed. Fix them in place with small pieces of the 3M tape.
7. Hinge the boards together in this manner: to account for the difference in thickness between boards *a* and *bc*, place a piece of scrap board to bolster up board *a*, and hinge boards *a* and *bc* together with a strip of black linen tape (Figure 4). Close the folder and dry under weight.
8. Line board *a* of the folder with a sheet of acid-free black paper: cut the sheet slightly larger than board *a* (the perimeter will be trimmed down once attached, to achieve perfect sizing). Cut a window into the sheet that is the same size as the window in board *a*, and positioned so that the distance between the window and gutter is equals that of board *a*, minus 1 mm.
9. Apply PVA to the perimeter of the board *a*, and its window, and to what will be the inner edge of the lining paper. Affix the lining paper to board *a*,

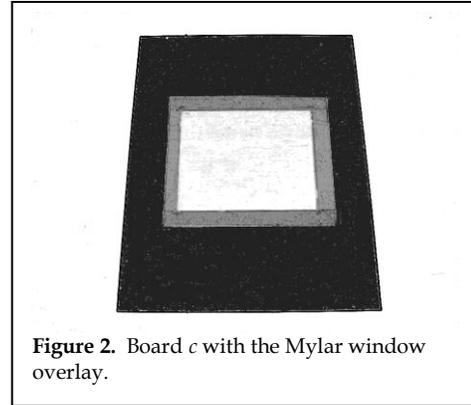


Figure 2. Board *c* with the Mylar window overlay.

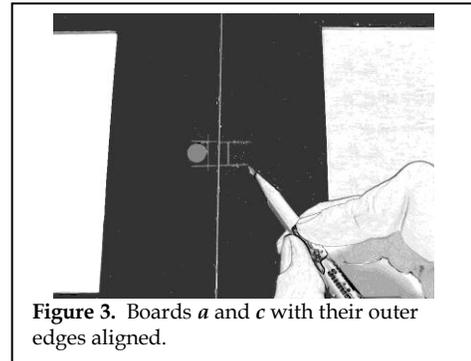


Figure 3. Boards *a* and *c* with their outer edges aligned.

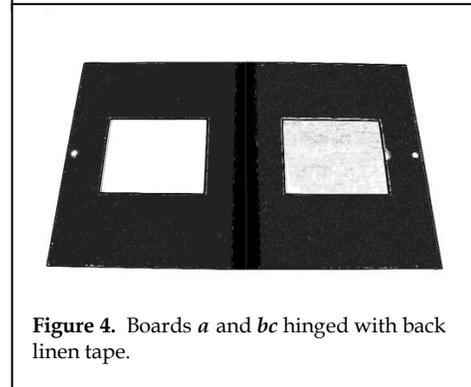


Figure 4. Boards *a* and *bc* hinged with back linen tape.

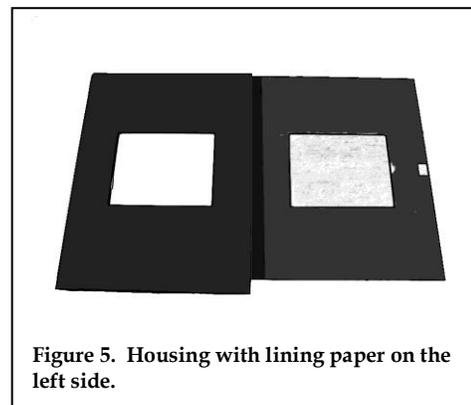


Figure 5. Housing with lining paper on the left side.

taking care that the windows are aligned and that the inside edge of the paper is about 1mm from the gutter of the hinge (see Figure 5), and covering the magnet. Once this is dry, trim down the lining paper flush with the edges of board *a*.

10. To create the flap for holding the glass plate in place, cut a piece of .004" Mylar<sup>®</sup>, equal in length and 4cm wider than the window in board *bc* and round the four corners (Figure 6). Set this aside for insertion once the housing is completed.
11. Cut a piece of lining paper for board *bc*, following the same procedure as in step 7. Reinforce the perimeter of the window of the lining paper (on what will be the surface of the sheet that will be glued to board *bc*), with a piece of .0001" Mylar<sup>®</sup>, cut to approximately 1.5 cm in width, all the way around (Figure 7). Affix this with the 3M tape.
12. Apply PVA to the top, right, and bottom edges of board *bc*, and to the inner edge of the lining paper and the top and bottom edge of the window. Use scrap material to create a straight line of adhesive approximately 2 cm past the corner of the window (Figure 8). Affix the lining paper to board *bc*, taking care that the lining paper's window edges are aligned, and that the inside edge of the paper is about 1mm from the gully of the hinge. Once this is dry, trim the lining paper so that its edges are flush with the edges of board *bc*.
13. Line the outer spine of the folder with a piece of black linen tape.
14. Insert the Mylar<sup>®</sup> flap created in step 10 under the left and right edges of the lining paper of board *bc* to finish the housing.

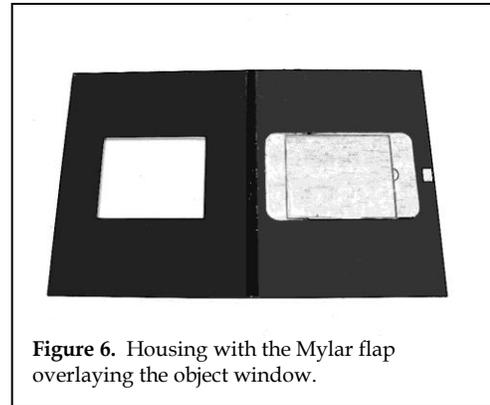


Figure 6. Housing with the Mylar flap overlaying the object window.

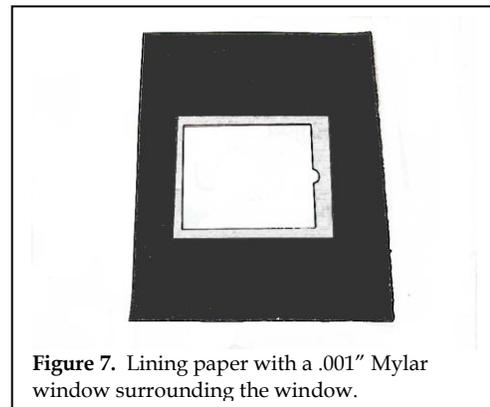


Figure 7. Lining paper with a .001" Mylar window surrounding the window.

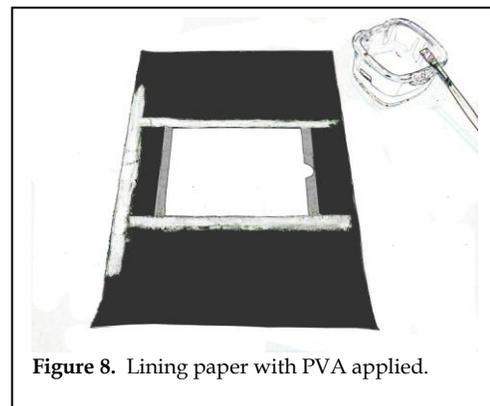


Figure 8. Lining paper with PVA applied.

The plate should be stored in the housing binder side toward the flap. To remove the plate from the housing, lay the folder flat on a surface before opening it. Place an index finger over the thumbhole and gently slide the Mylar<sup>®</sup> slightly away from the right edge to create an arch in the Mylar, then insert a finger under the arch to pull the flap away (Figure 9). Do not keep sliding the Mylar<sup>®</sup> so that it rubs on the binder of the plate; this risks damaging the image. To remove the plate, place a finger in the thumbhole and gently lift the plate up and out (Figure 10).

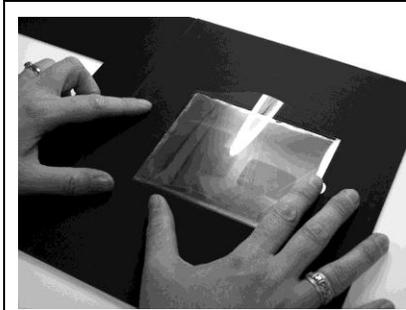


Figure 9. Lifting the Mylar flap.

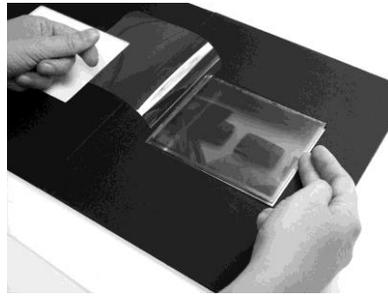


Figure 10. Removing the glass plate.



Figure 11

This housing is versatile and permits safe viewing of glass transparencies (Figure 11). When the folder is closed, the entire plate can be examined without direct handling. The removable flap is replaceable should it become damaged from normal handling. It is recommended that black rag board and linen tape be used in the housing's construction because fingerprints and wear will not be as obvious. Care should be taken that these housings be kept away from magnetic storage materials such as audio and video tapes and computers, because the Neodymium magnets may cause them damage.

#### MATERIALS SUPPLIERS:

Black rag board, 3M tape and black linen tape – [www.lightimpressionsdirect.com](http://www.lightimpressionsdirect.com)

Mylar and Hahnemuhle-Ingres #114 black paper – [www.talasonline.com](http://www.talasonline.com)

Neodymium magnets – [www.KJmagnetics.com](http://www.KJmagnetics.com)

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