OUT OF THE ARCHIVES

# Glass plate negatives: part 2

ARTICLE

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PHOTOGRAPHS

Jim Shaughnessy Collection

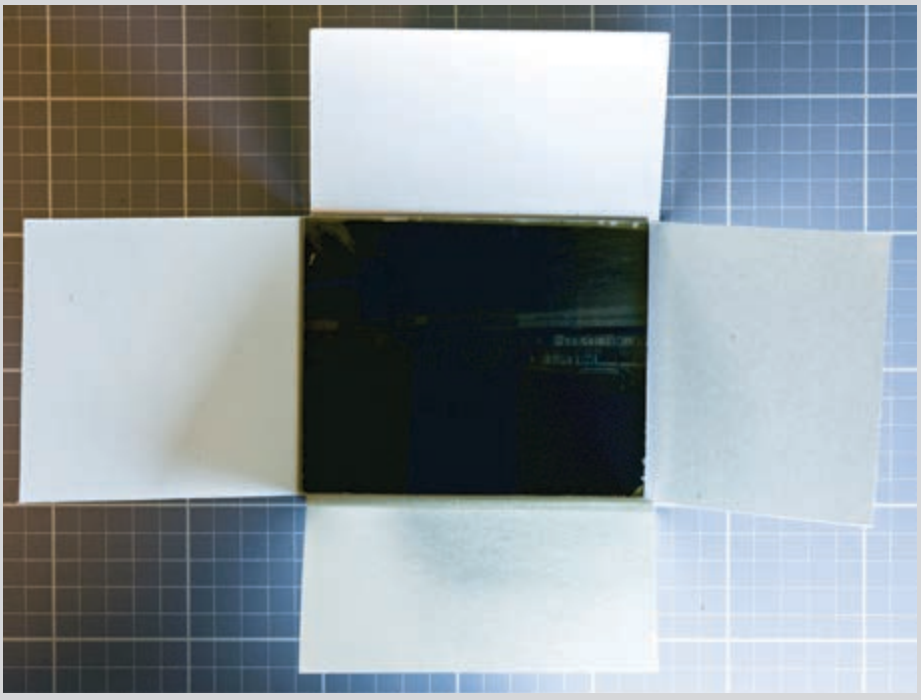
IN THE LAST INSTALLMENT of "Out of the Archives," I gave an introduction and history of glass plate negatives and shared some examples from our Jim Shaughnessy Collection. For Part 2 in this issue, I am sharing some tips on how to identify different types of glass plates as well as some best practices regarding their care and preservation. Be sure to read my updates about our archival work at the end; we have had a busy summer in Madison!

**Identification**

Throughout the history of photography, practitioners applied a variety of different photographic processes to glass. However, you will likely encounter only two types of glass plate negatives in historic collections: the wet plate collodion and the gelatin dry plate. Distinguishing between them may be considered a *mostly* academic exercise for casual collectors as preservation procedures are similar for both types. Yet identifying the emulsion on a glass plate can reveal a lot about the object's history. Plus, it can be fun!

When identifying glass plates, here are some of the main clues I look for:

*Date of creation*. Wet plate collodion negatives were produced mostly between the 1850s and 1880s. Gelatin dry plate negatives were produced mostly between the 1880s and the early 1930s.



*Size.* Wet plate collodion negatives can be found in a variety of sizes. Typical sizes include (in inches): 2½×2½, 3¼×4¼, 2½×4, 4×5, 5×7, 8×10, 11×14, 14×17, 16×20, 18×22, and 20×24. Most gelatin dry plate negatives were machine-produced in standard sizes. They include (in inches): 3¼×4¼, 4¾×6½, 4×5, 5×7, 5×8, 8×10, 10×12, and 11×14.

*Image color.* Wet plate collodion negatives are most commonly cream or gray colored, but they can exhibit a variety of colors such as neutral black or brown. Gelatin dry plate negatives typically exhibit neutral black or gray colors depending on the image chemistry and possible toning.

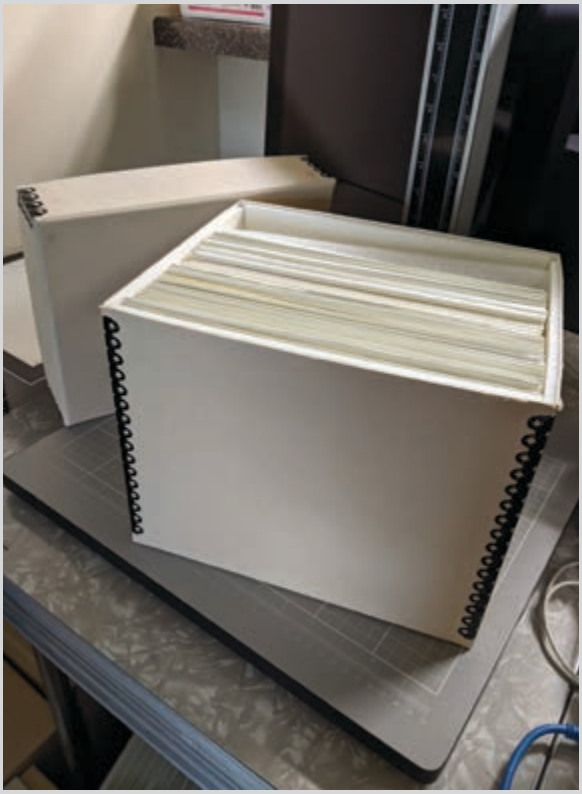
*Glass Support Characteristics.* Wet plate collodion negatives are typically 3 to 6 mm thick. Glass plates were often hand-cut and can exhibit rough edges or an irregular shape. Gelatin dry plate negatives are typically 2 to 3 mm thick. Glass plates were typically machine cut and usually exhibit smooth edges.

*Surface Characteristics.* Wet plate collodion negatives were hand-coated, so the emulsion side of the plate sometimes bears the artifacts of this process: unevenness, ripples from where the photographer poured excess emulsion off of the plate, blank corners from where the negative holder came into contact with the plate, or even a fingerprint from where the photographer held the plate. The negative image does not always extend to the edge of the glass plate. Gelatin dry plate negatives were machine-coated, so the emulsion side of the plate tends to be smooth and even. The negative image typically extends to the edge of the glass plate.

**Preservation**

The glass plate negatives that are still around today are *survivors*; some collections hold examples that are more than 150 years old! That said, they are far from indestructible. You should always take caution when handling or storing glass plates. I have listed some common procedures here, starting with the most important: *don't break them!*

*Handling.* The obvious drawback of the glass plate negative is the fragility of its glass support. When handling glass plates, wear nitrile gloves to protect the plates from the oils and residual chemicals on your hands and to prevent plates from slipping from your grasp. Also, remove glass plates from their original enclosures with care. It is not always easy to determine whether a plate is cracked or broken when it is inside an opaque envelope. Gently cut original enclosures



away from glass plates while they rest of a flat surface, rather than pulling them from their enclosure.

*Enclosures*. Intact glass plate negatives should be stored individually in acid-free paper enclosures. Four-flap envelopes are preferred over paper sleeves; sliding a plate in and out of a paper sleeve can damage the plate's emulsion. Broken or flaking glass plate negatives should be stored in specially-constructed protective sink mat enclosures made from corrugated board. Handle damaged plates as infrequently as possible.

*Boxes.* Once glass plates are enclosed inside envelopes, store them vertically along their longest edge in an appropriately-sized archival box. The box should be sturdy, acid-free, and PAT-approved. Many archival vendors like Gaylord or University Products manufacture boxes specially designed for the storage of glass plates. Differently sized plates should be stored in separate boxes to prevent edge pressure on any odd-sized plate. Interleave the envelopes inside the box with acid-free corrugated board and thin foam padding if possible. This should minimize shifting within the box as well as provide support and a degree of cushioning for the plates. Avoid overfilling the box; this prevents strain and somewhat diminishes the possibility that you will drop it. Do not stack boxes on top of each other; the pressure could damage the glass plates within.

*Storage environment.* The long-term stability of glass plate negatives, like any other photographic format, is dependent on temperature and humidity levels present in the storage environment. Cooler temperatures and lower humidity levels can yield slower rates of deterioration and lessen the potential of mold growth or insect infestation. However, if the tem-

Top right: This glass plate shows several signs of the gelatin dry plate process: neutral tones, a thin plate (1 mm) with smooth edges, and an image area that extends to the edge of the plate.

Above: While virtually all of the glass plates in the Jim Shaughnessy Collection can be easily identified gelatin dry plates, this one gives me pause. It exhibits signs of the collodion process: a warm tone, transparent corners, greater thickness (3 mm), and rougher edges than the rest of the plates in the collection. We do not know the date of creation and need further research to confirm the emulsion.

Top left: 8×10 glass plate negatives from the Jim Shaughnessy Collection stored in an appropriately padded archival box.

Opposite: A 4×5 glass plate negative from the Jim Shaughnessy Collection housed in a four-flap envelope.

perature drops too low or the storage environment becomes too dry, glass and photographic emulsions can become brittle. The ideal environmental conditions for long-term storage are: lower than sixty-five degrees Fahrenheit and a relative humidity of thirty percent with minimal fluctuations of both. This can be a challenging benchmark for small institutions and private collectors to achieve. If you are storing glass plates at home, you have to work with what you've got. My most practical advice would be to keep your glass plates in the most temperature-stable part of your home. Avoid storing glass plates in areas that experience extremes such as basements and attics. Do not put them in areas that lack basic climate control such as garages, barns, or storage sheds.

The glass plate negatives in our Shaughnessy Collection are among the oldest photographs in our archive; working with them has brought joy to everyone on our staff, and we are delighted to share these examples with you. With proper care, these and other glass plates can last for centuries and continue to bring joy to a century or more of future viewers.

**Railroad Heritage Visual Archive Updates**

The Center's collections staff have a lot of news to share this time around! Along with the rest of country, we have been working around occupancy limits and public health restrictions since March. I would be lying if I said that we haven't found these new working conditions challenging for all of the usual reasons, and it is difficult for us to process materials with limited access to our archival space and other facilities. Despite quarantine, the past few months have been a really productive time—we have been able to add several new Flickr albums and queue up quite a few more to be published over the coming months. Plus, we have recently been able to move some staff members back into the office on a limited basis with strict social distancing protocols.

Perhaps most importantly, since the last time I shared updates, four new collections have been physically transferred to our archive! First, Jeff Brouws personally delivered 24,000 slides from the Ron Hill Collection at the end of February. Next, Jim McClellan's slides arrived in June with the great help of Bill Schafer. Then, David Mainey began transferring his collection with three boxes of black-and-white negatives in mid-June. Finally, our staff, with considerable help from Bonnie and Dick Gruber, moved the collection of CRP&A founder John Gruber (1936–2018) to the Center's archive in mid-July (see page 7 for more about John's collection). We will begin rehousing and processing all of these new accessions over the next few months. Close to our hearts, the John Gruber Collection will be our next top priority after Shaughnessy; we are looking forward to sharing more from all of these collections with you.

On the processing front, intern Wesley Sonheim and Archives Associate Natalie Krecek are working in tandem to digitize and rehouse the 60,000 film negatives in the Jim Shaughnessy Collection. Wes reckons that it takes him approximately five hours to rehouse and digitize 100 of Shaughnessy's negatives (including their metadata), so we are expecting this project to occupy our staff for some time. Meanwhile, newly appointed Archives Assistant (former intern) Angel Tang continues to make high resolution scans of images from the Wallace Abbey Collection. She is also currently resleeving negatives from the David Mainey Collection. Once Angel has finished the Mainey materials, she will begin work on the Gruber Collection.

I would also like to add that participating in the Center's *Virtual Conversations* conference in April was a heartening experience for me and a great way to reconnect with so many of you. I was particularly gratified to see that many of the questions posed during the conference were archives-related, and I had a blast addressing them during the "Archives and Preservation Q&A," in April. All of us on the collections staff feel fortunate to be healthy and continuing to work, especially when so many others in our field have been furloughed or laid off. We are deeply grateful for the support of the Center's membership and board during throughout the pandemic. •

Camelback 4-6-0 locomotive 504 stands on the bridge across the New York State Barge Canal at Waterford, New York, circa 1915. Jim Shaughnessy Collection, photographer unknown. Shaughnessy-G-DH-016

Wagner Palace Car and people on the Lake George, New York, pier, circa 1890. Jim Shaughnessy Collection, attributed to Fred Thatcher. Shaughnessy-G-DH-028