A moving-image film primer

ARTICLE

Gil Taylor

PHOTOGRAPHS

Collection of the Center

WHITE FILM LEADER, STAMPED repeatedly with red letters spelling KODAK, flies by and is suddenly replaced with the streets of San Francisco sometime in the late 1960s in vivid color. Two children meander the sidewalk and the view pans to a cable car, navigating the steep hills of the city and filled with passengers, some leaning out, one giving a playfully rude gesture to the camera as it passes by. Once more, white leader disappears, this time revealing a scene of black-and-white, of hopper cars filled with iron ore and locomotives navigating the depths and steep hills of Minnesota's defunct Rouchleau Mine sometime in the late 1930s.

These vignettes, captured on Super 8 and 16mm film and part of the Center for Railroad Photography & Art's blossoming moving-image film collection, resurrect aspects of the railroad landscape in a way the still image cannot. Yet, as they bring to life the movement and power of a locomotive or the vitality of a worker or passerby, they also present a plethora of archival challenges. From initial surveying and viewing to rehousing and digitization, working with moving-image film has been a journey here at the Center, one that I have been lucky enough to spearhead.

Today, the Center's moving-image holdings consist of three collections ranging from the 1930s to the mid-1970s: the Jim McClellan Collection of eighty-nine Super 8 reels, the H. D. "Mike" Runey Collection of eleven 16mm and 8mm reels, and the Gordon Kelley Collection of eight 8mm reels. With several more planned collection acquisitions that also include moving-image film in the works, our holdings are poised to grow.

The first challenge I encountered as I prepared to process these collections was procuring proper equipment for evaluating each particular film gauge. Film gauge refers to the width and the type of perforations in the film. For example, both 8mm and Super 8 films are 8mm wide, but they have slightly different shaped perforations. (Compared to 8mm, the narrower perforations of Super 8 allow for a larger image on the same film.) Accordingly, each gauge needs a viewer constructed to accommodate a specific film width and equipped with sprockets to fit its specific perforation type.

Although we most readily associate projectors with viewing these sorts of film, I learned the safest and most reliable devices are hand-operated rewinds and film viewers. Projectors, most often motorized, inherently stress film as they mechanically wind it through their internal labyrinths, and they can even tangle and snap the film along its perforations or unknown weak spots. Rewinds, on the other hand, allow the user to slowly wind the film across a lightbox and use a loupe, or magnifier, to view the film frame-by-frame—not only to glean its content, but also its condition. However, this viewing does not provide a seamless, uninterrupted playback of a film's content. Film viewers, which consist of two rewinds on either end of a small screen connected to a light, allow the user to gently wind the film while actually being able to "watch" it at whichever speed they desire.

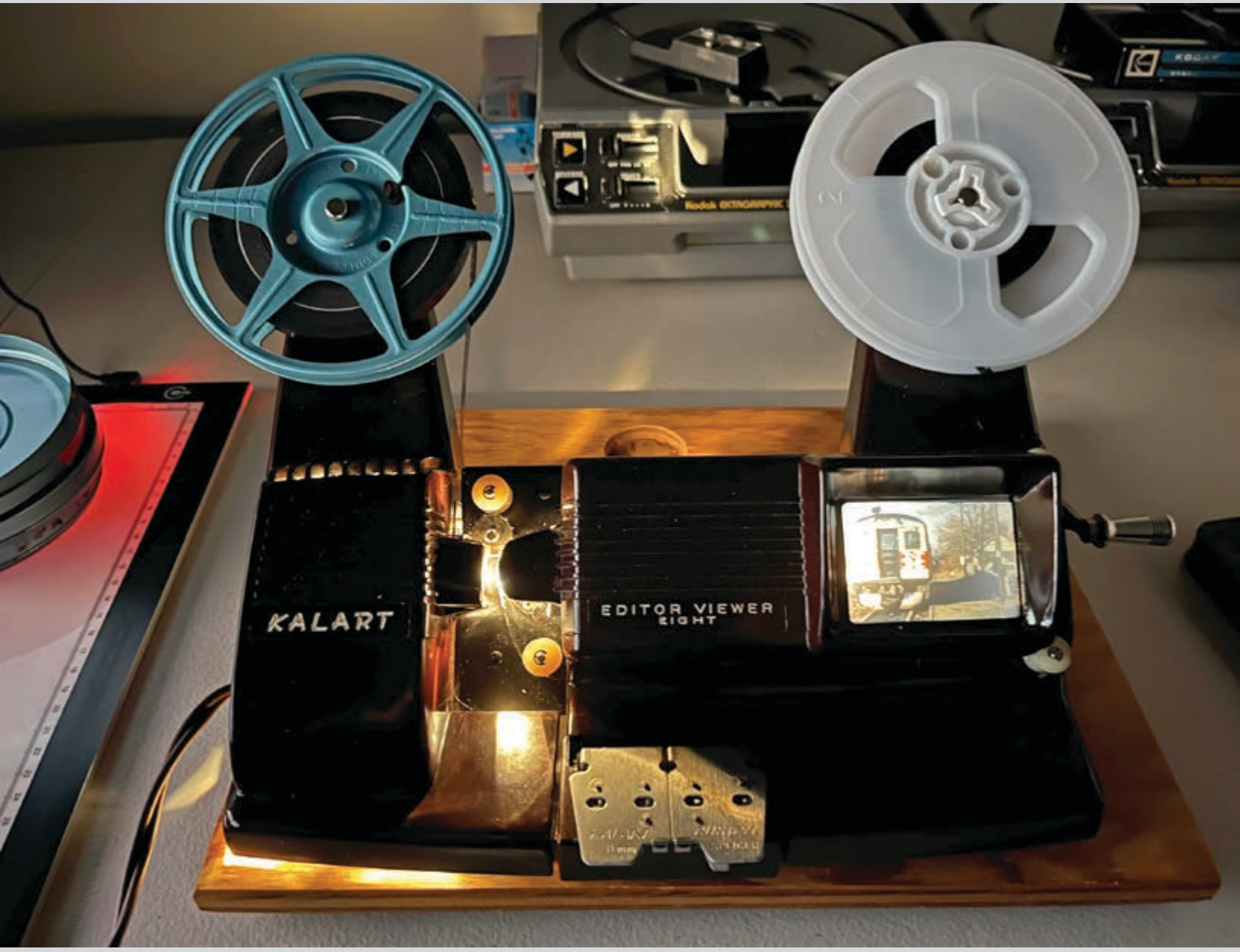
Unfortunately, procuring film viewers or rewinds has proved to be a challenge itself. Since this sort of equipment is no longer manufactured today, we have been relegated to trawling eBay and other secondhand marketplaces for reasonably priced and, hopefully, functional equipment. It can be difficult to glean from listings whether or not these devices actually work, despite the proclivity of most online vendors to list them as "operable" or "like new."

Through trial-and-error and diligent searching, the Center has acquired a serviceable collection of film viewers for each gauge we currently hold. We also learned that—when purchasing is not an option or out of budget—free traveling lending kits are often offered by other, larger audiovisual repositories. In our case, Recollection Wisconsin, in partnership with the Wisconsin Center for Film and Theater Research, shipped us a kit including two rewinds, film repair equipment from splicers to new headers, and even handbooks detailing handling and usage.

The second challenge I encountered when processing new acquisitions is rehousing the film from original—often rusty, bent, or otherwise malformed—reels and cans into archival-grade housing. This is an essential step for the preservation of any film: rusted metal and corroded plastic reels not only make any sort of viewing dangerous, but they also contaminate film as they degrade, and worse, their cans are often airtight, further accelerating any degradation.

For 8mm and Super 8 films, new housing means chemically inert polypropylene reels and vented cans, while for the larger 16mm and 35mm formats, chemically inert polypropylene film cores and vented cans. There are a variety of vendors for archival film housing, but largely we have stuck to MomentCatcher Film Supplies for 8mm and Super 8, and for larger formats, Gaylord Archival sells STIL 16mm and 35mm housing.

Opposite: A vintage 8mm film viewer in use viewing a film from the Gordon Kelley Collection. While we typically think of watching films with projectors, viewers like this one are much safer for the films. Photograph by Gil Taylor


KALART
EDITOR VIEWER
EIGHT

Above: Baltimore & Ohio Railroad 3135 steams over a trestle as the fireman hangs out of the cab window in an unidentified location sometime in 1948. (Runey-V-09)

Right: Algoma Central Railway workers load canoes into a freight car somewhere in northern Ontario, Canada, in the 1940s. (Runey-V-11)

Opposite: A corroded Super 8 reel from the Jim McClellan Collection next to its new, archival housing.

For the most common reel sizes, such as three-, five-, or seven-inch diameter, this is a simple task, but we have occasionally encountered odd sizes that required a bit more searching to find suitable housing. The Runey film, for example, included two oversized reels, one measuring in at 11.75 inches and another at fifteen inches, sizes modern manufacturers either do not sell or sell only in bulk quantities of one hundred or more. For these films, we were fortunate to receive properly sized cans from our friends at the Wisconsin Center for Film and Theater Research, who had lent us their traveling film inspection kit.

The final challenge is that of digitization, which not only allows us to view and share our films safely, but to place the original material in cold storage (for more on our cold storage, stay tuned for a future OTA article), which significantly decreases the rate of deterioration, lengthening the useful lives of the films by decades. Although today there are a variety of "at home" digitization kits available by manufacturers such as Wolverine, these frequently do not capture sound and offer limited resolution in their resulting digital files. With these limitations, we do not feel their prices of several hundred dollars are justified. At the other end of the spectrum, multi-gauge digitization setups can cost tens of thousands of dollars.

Luckily, many companies provide digitization services that are much more affordable for the home archivist or institutions, such as the Center, for whom purchasing large-scale professional equipment does not match current needs. Many of these services, such as Kodak's Digitizing Box, are based online and are as simple as sending film by mail and receiving a flash drive containing your digitized files in return. Although these services can be pricey, with their ease of use and convenience, they are often the perfect choice for those who have just a few reels. Here at the Center, we utilize a local operation, Holder Printworks run by Joyal Holder, for our moving-image film digitization. Having a local provider a short drive from our facility ensures that our film is never subject to the environmental concerns and physical handling of shipping services, and more importantly it allows us to develop a working relationship that ensures our film is in safe hands.

As a result of working through these challenges, we have been able to construct a process that allows the moving-image films in our collection to evolve from deteriorating, intimidating objects into living history. Understanding moving-image film and

working with its best practices transforms these objects from opaque and unwieldy relics into usable visual records that allow us to witness a Milwaukee Road *Hiawatha* passenger train depart from the station or Algoma Central Railway workers load canoes into a freight car in rural Ontario. These films have become an integral part of our holdings that both contrast and augment our primary collections of still images in ways that elevate the two types of media. In collecting and learning how to take care of these historical records, we are able to not only preserve them, but most importantly disseminate and share them.

Author Gil Taylor, processing archivist, joined the Center's staff in January 2021. He has a master's degree in archival studies from the University of Wisconsin's iSchool and has worked at a variety of art and history museums in Wisconsin and his home state of Maine.

Railroad Heritage Visual Archive Updates

By Adrienne Evans, director of archives and collections

First off, CRP&A's collections staff would like to thank everyone involved with April's Conversations conference for a fun and productive weekend. I was there along with Heather Sonntag, associate archivist; Erin Rose, reference and digital projects archivist; and Elrond Lawrence, acquisitions and marketing coordinator. Heather and I shared general updates and took a dive into the Steinheimer-Burman Collection on Saturday, while Erin and Elrond discussed new collections and gave attendees a sneak peek of Odyssey, our new collections management system, on Sunday. It was great to hear everybody's comments, feedback, and questions regarding our work.

In addition, we were floored by the enthusiastic response to our collections identification table, a new feature at this year's conference. We showed up on Friday with sixty-five collection images lacking location and/or date information, and we were thrilled as attendees basically turned the table into a rollicking game of railroad Trivial Pursuit throughout the weekend, identifying virtually all of the images we put in front of them! We're counting this as a huge success and will be looking to bring the identification table back in 2024.

Now, on to updates. Throughout this spring, our collections staff has been focused on one of our biggest projects to date: launching Odyssey for public browsing and search. Since mid-April, Erin, along

Collection	Processing Status
Jim Shaughnessy	~45% complete
John Gruber	~50% of total complete (B&W complete)
Henry Posner III	~70% complete for images on-site
Richard Steinheimer / Shirley Burman Steinheimer	~7% complete
John C. Illman	Images on-site complete
Stan Kistler	Estimated start: Fall 2023
Karl Zimmermann	Estimated start: Fall 2023

Southern Pacific 3804 assists the first section of train 553 through the Likely Loop on the Modoc Line near Likely, California, on July 29, 1955. The head end power came from cab-forward locomotives 4211 and 4250. Photograph by Stan Kistler, Kistler-SFB3-TEMP-24-01

with Natalie Krecek, processing archivist, and Abigail Guidry, archives and administrative assistant, have all taken a break from their processing duties to assist with the data migration of 8,000 of our images from Flickr, complete clean-up of the associated metadata, and populate Odyssey with new content. As this issue goes to press in late May, the migration is complete, and we're focused on clean-up. We've reviewed and edited more than 4,000 catalog records over the past few weeks, and we are planning to launch Odyssey in June. Stay tuned to our social media channels and monthly e-newsletter for more updates.

On the processing front, Heather is really digging into Richard Steinheimer slides at this point. She's just digitzed two boxes from his 1968 Overland Route Project, which was part of the focus of her excellent presentation at Conversations. Meanwhile, Gil continues making steady progress on the Henry Posner III Collection. He recently finished processing slides depicting Posner's travels in Paraguay, the fortieth country Gil has processed out of the fifty-four countries represented in the collection. Gil estimates his work with the Posner slides will be complete in the autumn of 2023; still to come are Henry's approximately 10,000 black-and-white negatives. Also worth mentioning is Abigail's milestone with the John Gruber Collection. In early April, she completed the processing of his massive black-and-white negative series—she's digitized approximately 40,000 Gruber negatives since starting as an intern in 2021!

Finally, a huge thanks goes out to Elrond Lawrence, who has stalwartly shepherded the remaining negatives of the Stan Kistler Collection to the Center over the past few months. I'm happy to report that all of the collection is now safe and sound at the Center's archives in Madison and the most vulnerable of these negatives have been placed in cold storage. •

Left: The rear brakeman and his grandson ride in the caboose of Union Pacific's local freight train to West Yellowstone, Montana, in September 1968. Photograph by Richard Steinheimer, Steinheimer-Burman-T-015

Below: Ferrocarril Presidente Carlos Antonio López workers turn locomotive 53, a 2-6-0 built by the North British Locomotive Company, on a hand-operated turntable in the railyard in Asunción, Paraguay on September 24, 1992. Photograph by Henry Posner III, Posner-17-08-11