# Picturing West Virginia

## Early Photography in the Mountain State, 1840-1915

West Virginia and Regional History Center

WVU Libraries

2019

Gallery 1

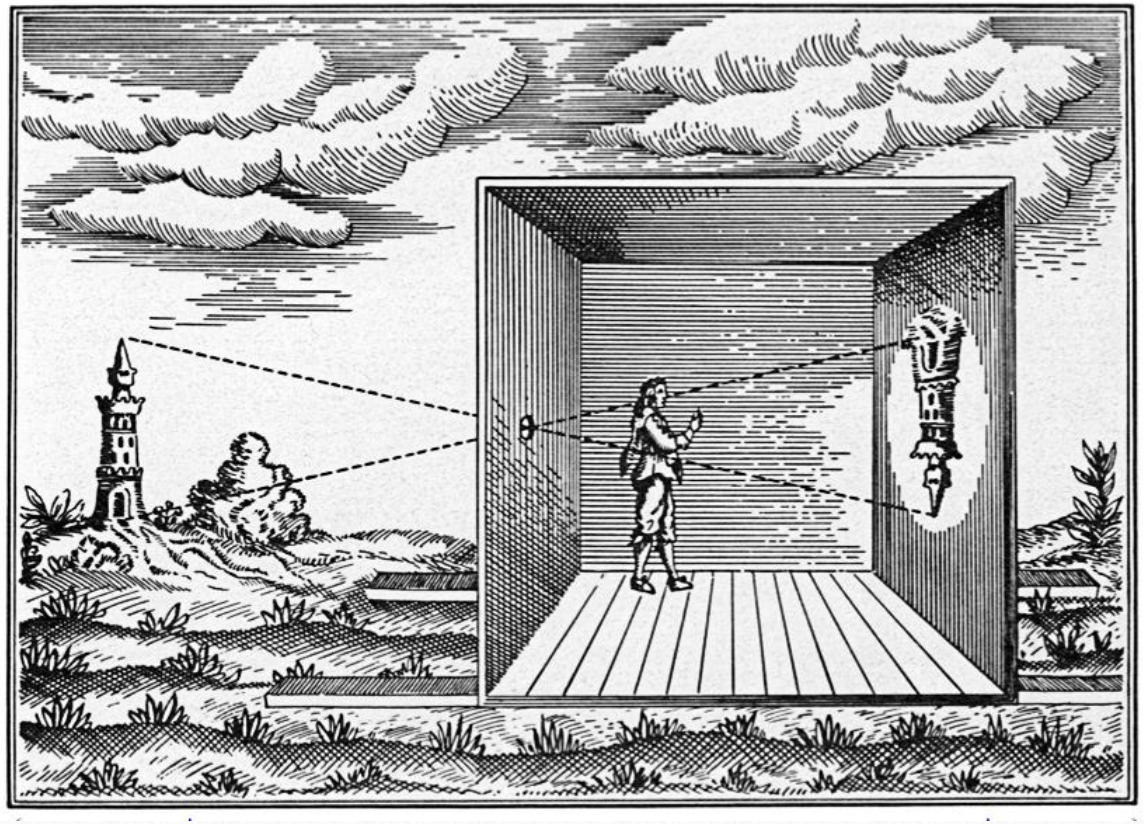
The 2019 West Virginia Day exhibition "Picturing West Virginia: Early Photography in the Mountain State, 1840-1915" explores the history of photography using examples from collections of the West Virginia & Regional History Center. The exhibit documents photographic processes, formats, and equipment from daguerreotypes to wet plates to brownie cameras, of the 19th and early 20th century. It also touches upon the ways photography impacted West Virginians and the world.



The WVRHC extends a special thanks to Morgantown photographer and collector Ron Rittenhouse for his expertise and loan of several cameras and photographs which have greatly enhanced this exhibit.

# The Camera Obscura

Attempts at capturing images date back to ancient times. The camera obscura, or pinhole camera, was known to the Chinese and Greeks more than 2,000 years ago. It consists of a dark chamber (camera) with a hole, and later a lens, in one side. Images from outside the chamber are projected through the hole onto the opposite wall of the chamber. The images appear reversed and upside down. A mirror can be added to flip the images for a normal view. The camera obscura can be used to view eclipses without damaging the eyes. It was also commonly used by artists to assist them in creating proportionally correct drawings.



17th century illustration of the camera obscura in use by an artist

# Pioneers of Photography

The camera obscura enabled the projection of images. The invention of methods to permanently capture images did not occur until much later. In 1777, Johann Schulze discovered that silver salts could be darkened through exposure to light. He demonstrated his discovery by making words appear in the salts by exposing them to sunlight. While he did not attempt to "fix" (make permanent) the images he produced, his discoveries, combined with the camera obscura, provided the basics needed for the invention of photography.

A little more than a hundred years later, Louis Jacques Mande Daguerre, building upon earlier work of Nicephore Niepce, invented the first successful photograph medium, the "daguerreotype." Daguerre discovered that a copper plate coated in iodized silver, placed in a camera obscura and exposed to light for five to seven minutes, would hold a latent image. After exposure, the image could be further developed by putting it in another box and subjecting it to mercury vapor. The image could then be permanently fixed by washing it with a solution containing table salt to dissolve the unexposed silver iodide. What was left was an image with a mirror-like reflective quality. In 1839, Daguerre sold full rights to his invention to the French government and published a pamphlet that described all the details of the process which became a best seller. Photography would soon become a burgeoning industry around the world, particularly in America.

# The Daguerreotype

William and Eliza Foster, parents of songwriter Stephen Foster

Daguerre's process produced a direct positive, meaning no negative was created. The daguerreotype could not be reproduced unless photographed itself. Within a year of the publication of the process, improvements in camera lenses and sensitized plates shortened the exposure time to five to forty seconds. This made daguerreotypes practical and ideal for portraiture. Unless a prism was used in the camera to correct the image, daguerreotypes are laterally reversed meaning that text will appear backwards or wedding rings appear on the right hand instead of left.


Nathaniel Bailee

# Daguerreotypes

Daguerreotypes were made in standard sizes ranging from a whole plate of 8½ by 6½ inches to a sixth plate of 2¾ by 3¼ inches. Sixth plates and quarter plates (3¼ by 4¼ inches) were the most common. Portraits were often colored by hand to add blush to the cheeks and sometimes gold was applied to jewelry. The daguerreotype plate was then placed under glass in a case sometimes with a mat and preserver.

Shown here are Mary Matilda Bailee (top left); William G. Battelle and friends (top right); William Battelle a few years later (bottom, second from left); Anna Battelle (bottom, furthest left); Anna and Thomas Real (bottom, furthest right); and M. A. Valentine (bottom, third from left).

# Photograph Cases

Daguerreotypes and ambrotypes (and sometimes tintypes) were generally housed in photograph cases that ranged from simply decorated to highly ornate. While many were made of wood covered in leather, photograph cases were among the first items made of thermal plastic, a biodegradable moldable material that preceded petroleum-based plastic.

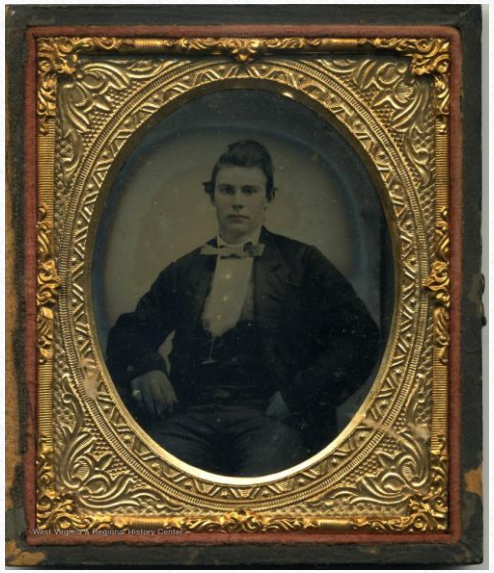
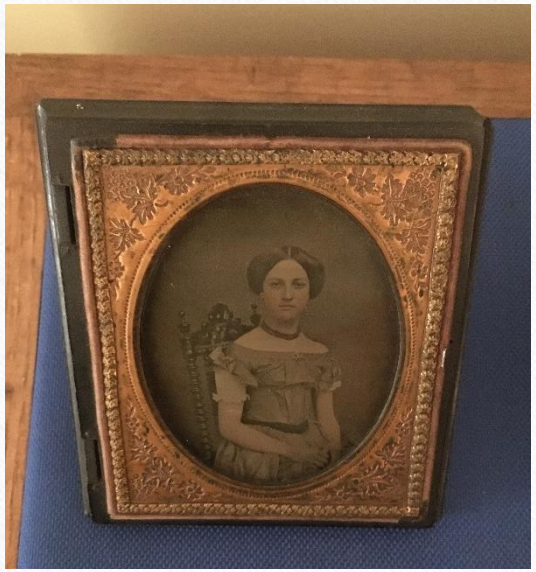
# Ambrotypes

The ambrotype used a polished plate of glass as its base. The emulsified plate was underexposed in a camera and sometimes bleached after being developed, creating a light white silver image. To make it appear positive, the glass base was backed with black cloth, paper, metal, or paint. Like the daguerreotype, the ambrotype is a direct positive image.


William G. Brown and Daniel T. Farnsworth, WV politicians

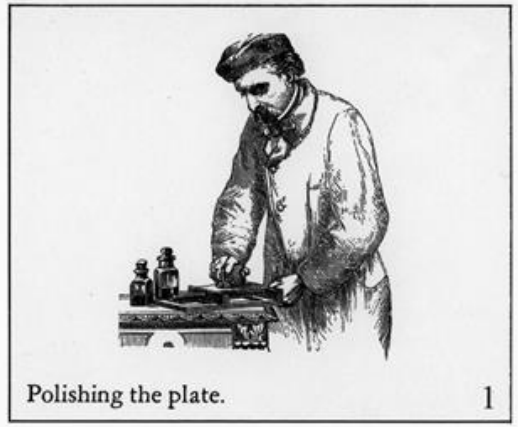
# Ambrotypes

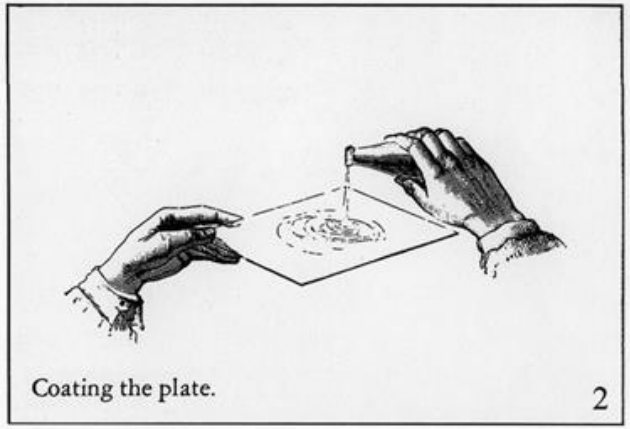
Ambrotypes were also hand colored and put in cases but they do not have the reflective look of a daguerreotype. They are not usually laterally reversed like daguerreotypes, as the glass base could be flipped over in the case to show the correct view. Cheaper than daguerreotypes, ambrotypes peaked in popularity in the mid-1850s. The ambrotypes shown here date from the 1850s. Pictured, from left to right, are J. P. Gardner, Anna Battelle, Anna and James Battelle, and James Battelle at four months.

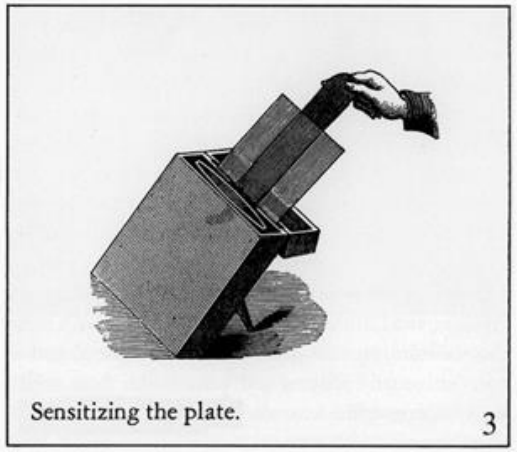



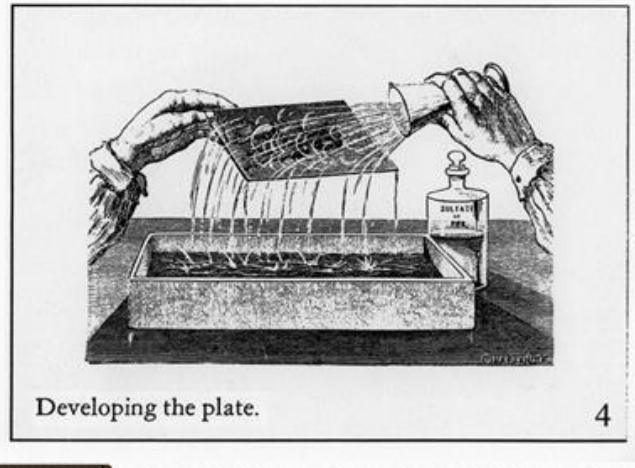
# The Wet Collodion Process

The wet collodion emulsion process was developed in 1848 and made available to the public in 1851. In this process, collodion (a mixture of nitrated cellulose, ether, and alcohol) was poured over the base material (usually glass or tin) which was then soaked in a silver nitrate solution. While still wet, the base was then placed in a holder, exposed in a camera, and then developed.


Polishing the plate. 1


Coating the plate. 2


Sensitizing the plate. 3


Developing the plate. 4

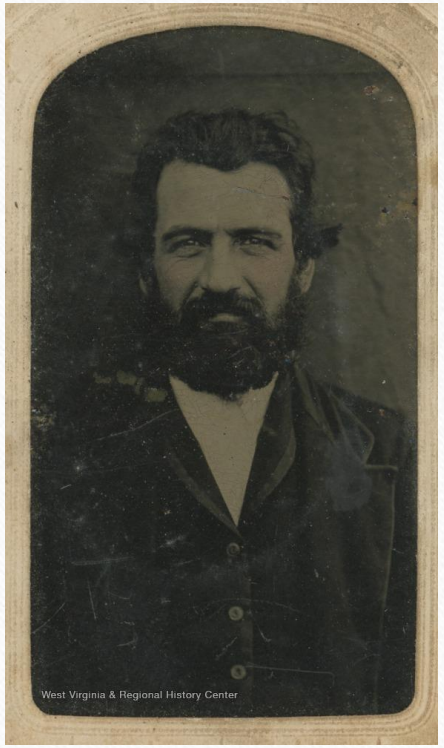
This process had to happen quickly - typically within fifteen minutes - so it was better suited for portraits taken in a studio. For photographs outside of a studio, the photographer had to have all of his equipment and chemicals on site and set up a mobile photo lab. The collodion process was in popular use until around 1880. It was used to make ambrotypes, tintypes, and wet plate negatives.

# Photographer and His Equipment Wagon, Morgantown, WV circa 1900

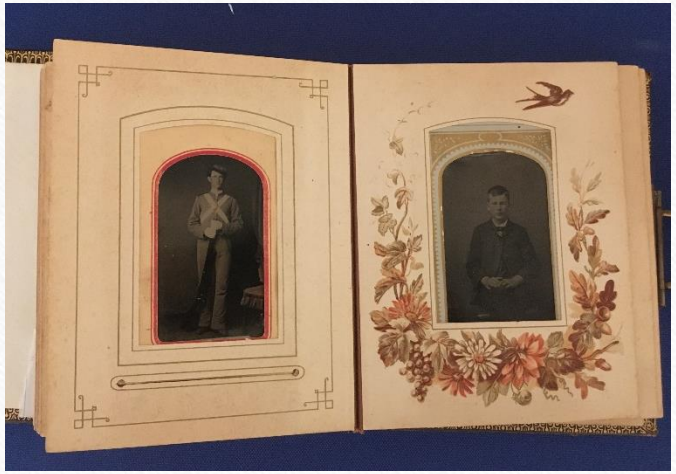

Photographers using the wet collodion process who wanted to photograph outside or have a mobile studio had to carry a significant amount of equipment and chemicals with them to be able to take the photos and then develop them onsite. The umbrella on the photographer's wagon served as the roof of his portable darkroom.

# Tintypes

The tintype, another direct positive image, produced using the wet collodion process, was introduced around 1856. As indicated by its name, the base of the tintype was tin plate. Tintypes could be hand colored and placed in cases, but they were often put in paper mounts or albums or just left loose. They were less expensive than both daguerreotypes and ambrotypes. Tintypes were very popular with Civil War soldiers who would send them to their families at home.




# Tintypes



# Tintypes

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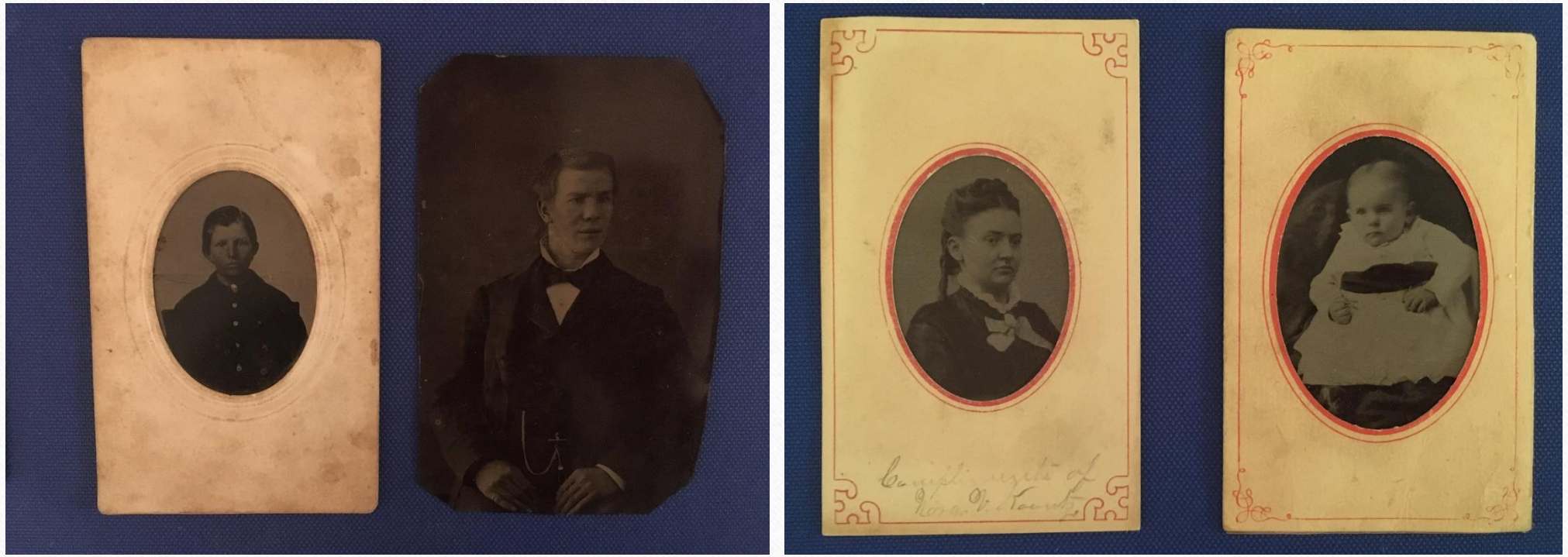


# Tintype Camera

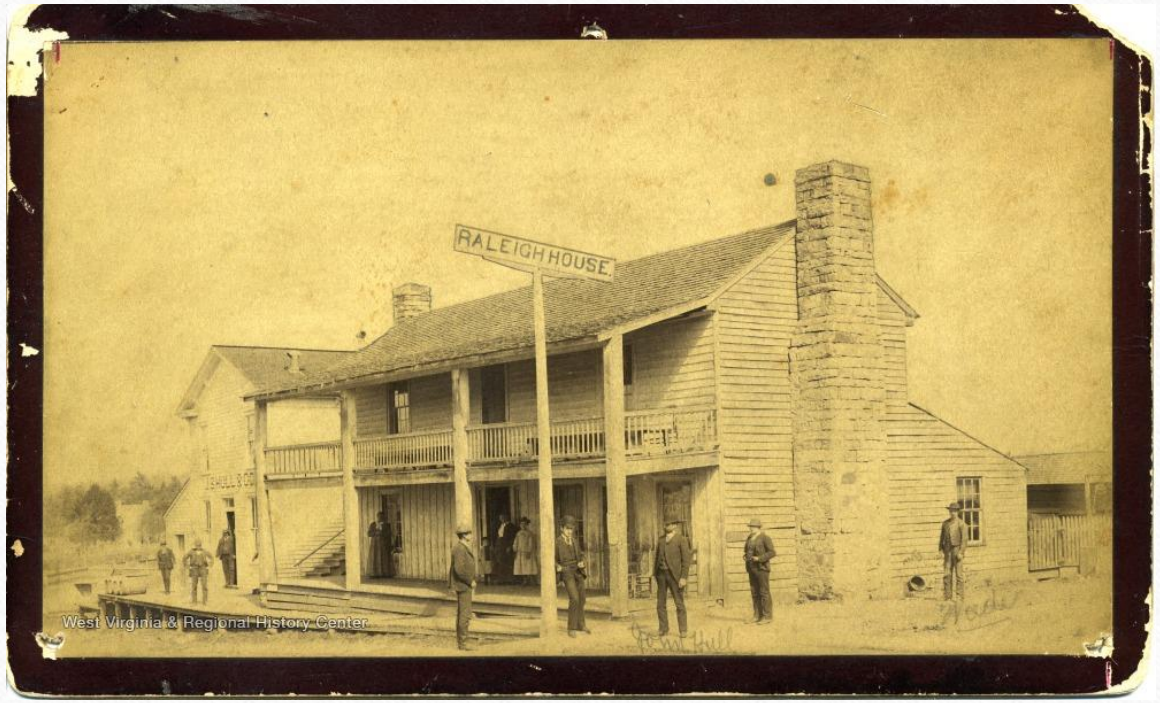
Tintype cameras produced photographic images from collodion wet tinplate. After exposure, the plate was dropped into a canister attached to the camera bottom for ten minute processing. The finished product was a 2x2 image on thin sheet metal.

# Century Portrait Studio Camera, circa 1904

This studio camera has a mahogany wood body with a cherry wood base and brass hardware. It used dry plates to produce 5x7 to 6.5x8.5 images. A brass plate attached to this camera below the lens reads "Century – Nicoll's Art Store Photographic Supplies, 1231 Market Street, Wheeling, West Va."

# From Negative to Positive: Albumen Prints

The development of the collodion wet plate negative changed the primary photographic method from direct positives (daguerreotypes, ambrotypes, and tintypes) to the system of printing positives from negatives. As a result, using albumen printing on paper became the most popular printing process in the 19th century. In fact, albumen prints from wet collodion glass negatives comprise 80 percent of all 19th century photographs that survive today.




A group photo outside of Raleigh House Hotel, Raleigh County, W. Va.

# Albumen Prints

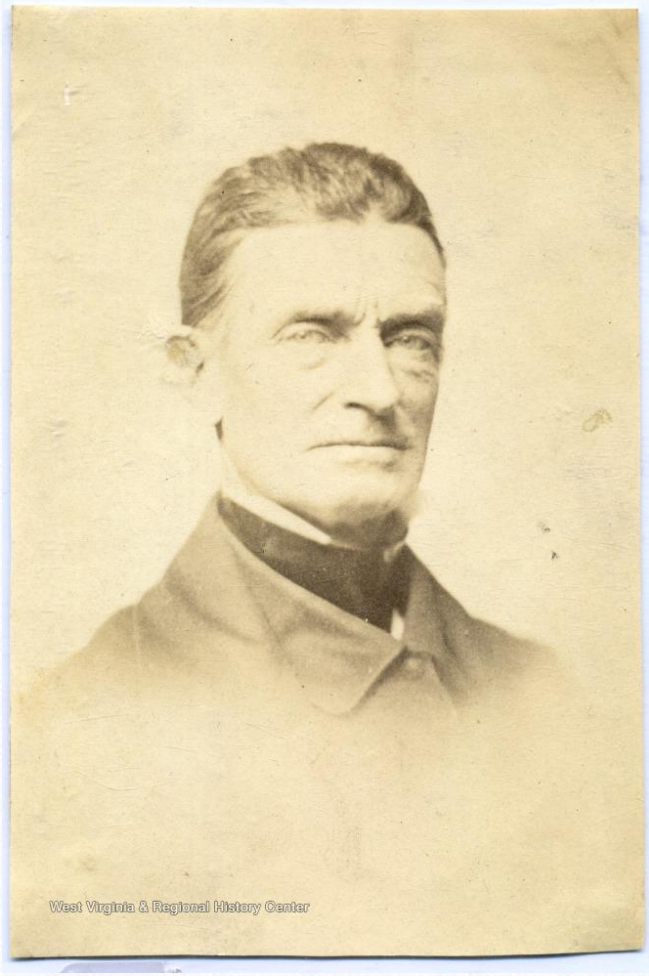
The use of albumen (egg white) as part of an emulsion mixture simplified the photographic process. Paper could be coated with the albumen emulsion, dried, and stored. When it was time for use, the paper would be sensitized by floating it in a silver nitrate solution and used immediately by placing it in contact with a glass plate negative (usually created by the wet collodion process) then exposed to the sun in a printing frame until the print had the preferred level of darkness.

# Albumen Prints

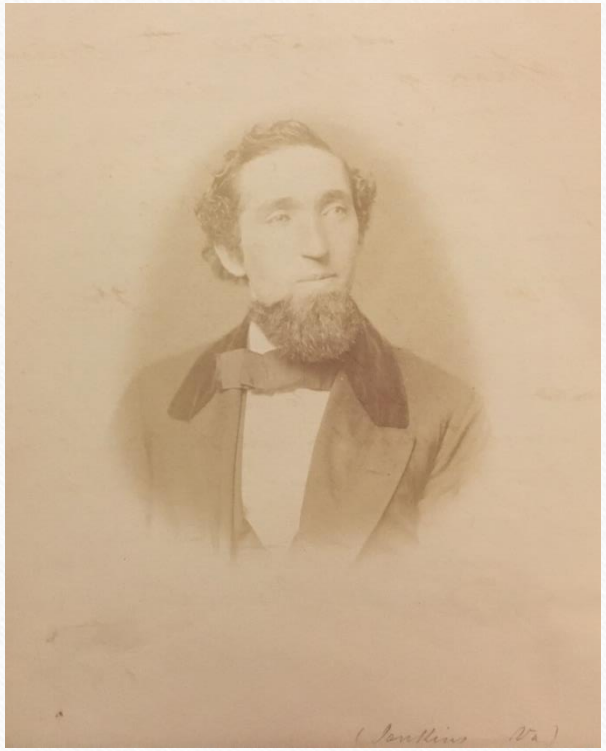
Yellowing discoloration is strongly associated with albumen prints. Albumen yellowed in part because of the use of gold chloride in the fixing process as well as the natural aging of the egg albumen. Another characteristic of albumen prints is small cracking in the emulsion. Most albumen prints were made on thin paper and so they were mounted on cards.

# Cabinet Cards

When CDVs began to decrease in popularity, larger card mounted photographs were introduced. Standard cabinet card prints measured 4½ by 6¼ inches. The mounting cards routinely included ornate decorations as well as the name of the photographer and studio. Cabinet cards and larger card mounted photographs were popular well into the 20th century. The cabinet cards shown here are albumen prints. The men pictured are prominent figures in West Virginia history. Can you identify them?

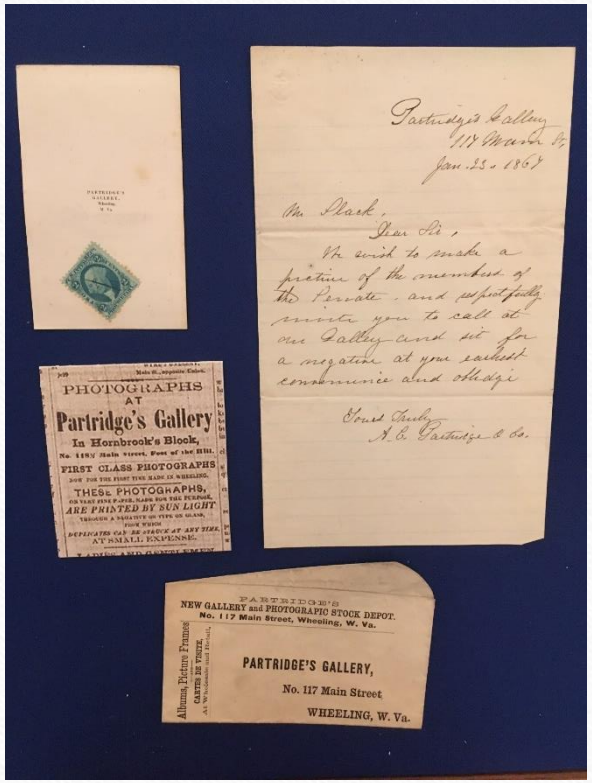



# Salted Paper Prints



The calotype process used a paper negative to create a salted paper print. It was in use at the same time as the daguerreotype but never achieved wide popularity due to patent restrictions and the fuzzy quality of prints in which paper grain was visible. The calotype also lacked the range of tones that were seen in daguerreotypes. Still, the calotype is an early example of the negative to positive process that would eventually dominate after the development of the wet collodion negative and albumen print paper. Although the calotype process didn't catch on in a big way, salted paper continued to be used and was paired with the wet collodion and other types of negatives to create prints in the late 19th century. These salt prints feature images of West Virginia politicians Albert Gallatin Jenkins and Zedekiah Kidwell.

# Partridge's Gallery




Pioneer photographer Asa C. Partridge settled in Wheeling in 1848. Wheeling city directories show that he was operating a photography studio and gallery by at least the mid-1850s and it is likely that he began his business not long after his arrival. In 1867, Partridge wrote the letter shown here requesting an opportunity to take a photograph of the West Virginia Senate. The two cent stamp on the back on one example represents payment of a federal luxury tax on photography that was in effect from 1864 to 1866.


# Photography and Art: Winter Landscape by William H. Partridge (1858-1938)

Recognition of photography as an art form, and the photographer as an artist, dates back to the very beginning of photography. In fact, many early photographers were also painters, graphic artists and illustrators. The great American landscape painter Worthington Whittredge worked as a 'daguerrean artist' in the Midwest before moving in 1843 to Charleston where he launched a career as one of the nation's leading painters. Nearly all photographic studios during the nineteenth century provided the service of "finishing" photos by adding hand coloring in oil, watercolor, charcoal or other media.

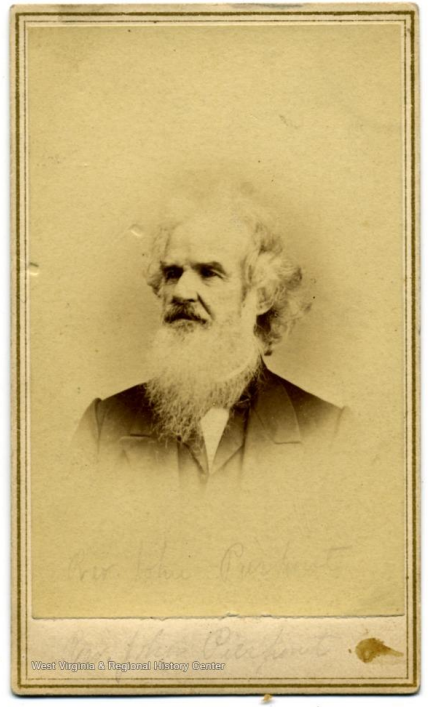
The son of pioneer Wheeling photographer Asa C. Partridge, William H. Partridge "finished" photos in his father's studio in Wheeling and later in Massachusetts before pursuing a career as a prominent American landscape painter during the early 20th century.


# The Carte de Visite

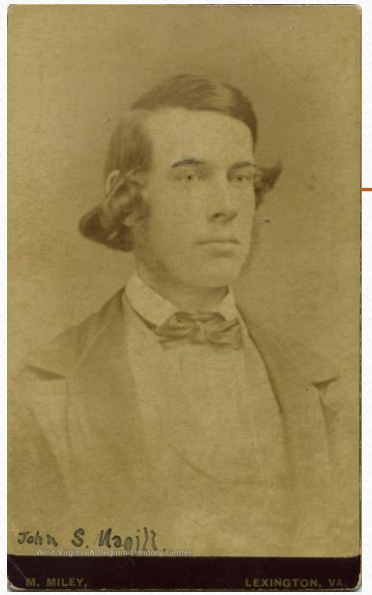
Cartes de visite, commonly referred to as CDVs, were named after (and the same size as) French calling cards. When they were first introduced in the 1850s it was thought that they would soon replace calling cards altogether, though that did not happen. They did, however, become incredibly popular beginning in 1859 and lasting through the early 1870s. In 1863, they inspired such a collecting furor that journalists coined the term "cardomania" to describe the craze. Boston physician and photography enthusiast Oliver Wendell Holmes suggested several reasons for the trend, "It is cheapest, most portable, requires no machine to look at it with, can be seen by several persons at the same time…"

# The Carte de Visite

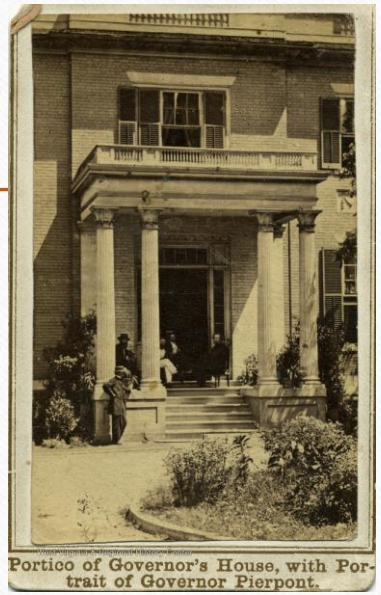
The standard CDV is 4 ½ by 2 ½ inches in size and consists of a small portrait photograph mounted on a card backing. Most of the photographs were albumen prints created from wet collodion negatives, though sometimes other paper prints such as salt or gelatin prints were used. To created CDVs, photographers used a special camera that had multiple lenses and a moveable plate holder that captured several images at once. This enabled the mass production of the photographs. Some studios printed thousands each day.

# The Carte de Visite

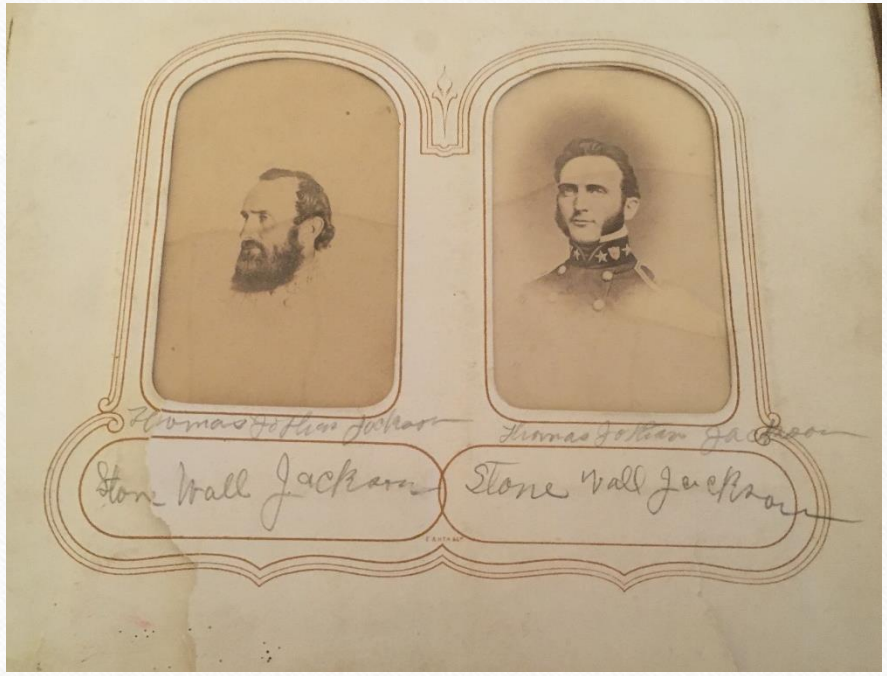



"Secure the shadow ere the substance fades" was one of the earliest advertising slogans used by mid-19th century photographers to prompt the sale of photographs, particularly CDVs. The ads encouraged the public to capture images of family and friends before their loved ones were gone, but the idea of sharing these convenient "likenesses" took on a life of its own. The proliferation of cartes de visite in households across America inspired another innovation that took the nation by storm—the photograph album.



Portico of Governor's House, with Portrait of Governor Pierpont.

# “Stonewall” Jackson Family Carte de Visite Photo Album

This album belonged to George Jackson, double cousin of General “Stonewall” Jackson. The left page holds two CDVs of General Thomas “Stonewall” Jackson, on the right are CDVs of his sister, Laura Jackson Arnold and her son, Stark Arnold.




Hundreds, if not thousands, of CDVs reside in the collections of the West Virginia & Regional History Center. The CDVs pictured here are all examples of albumen prints attached to a mounting card.

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# Glass Plate Negatives

The glass plate negative, which produced a clearer, sharper image than earlier photographic methods, revolutionized photography in the second half of the 19th century. The collodion wet plate negative, primarily popular from the 1860s to the 1880s, essentially changed the primary photographic method from direct positives (daguerreotypes, ambrotypes, tintypes) to the system of printing positives from negatives.


# Glass Plate Negatives

The introduction of gelatin emulsion in the late 1870s significantly changed photography and is still the most commonly used emulsion to this day. Gelatin emulsion is a dry process that is used to create both negatives and positives. The medium was bulk manufactured enabling photographers to purchase paper, glass, and later film that was ready for use. Unlike the cumbersome and complex wet collodion process, gelatin emulsions worked quickly and were more portable, making it simpler for amateur photographers to take up the hobby.

# Glass Plate Negatives

Gelatin dry plate glass negatives first became available in 1879 and remained in use until approximately 1920. These plates were thinner than earlier glass plates and came in standardized sizes of 4x5, 5x7, 8x10, and 11x14. They were coated in an even layer of the gelatin emulsion. Gelatin glass plate negative images are generally more starkly contrasted in their black and white whereas wet collodion plates exhibit cream and gray tones.

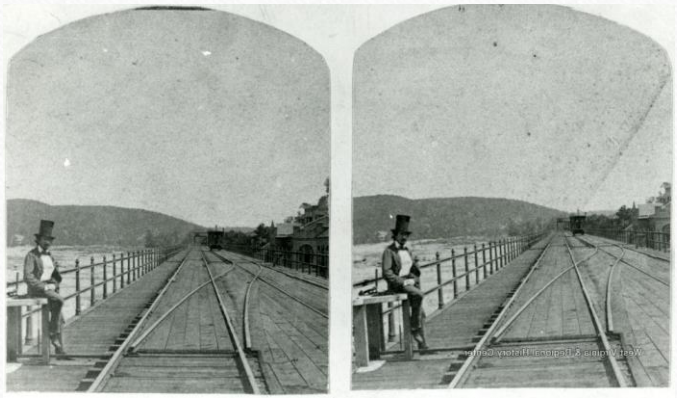

The image of labor leader Mary Harris "Mother" Jones seated in a wooden chair is similar to what would have been produced by the 11x14 glass plate negative seen above.

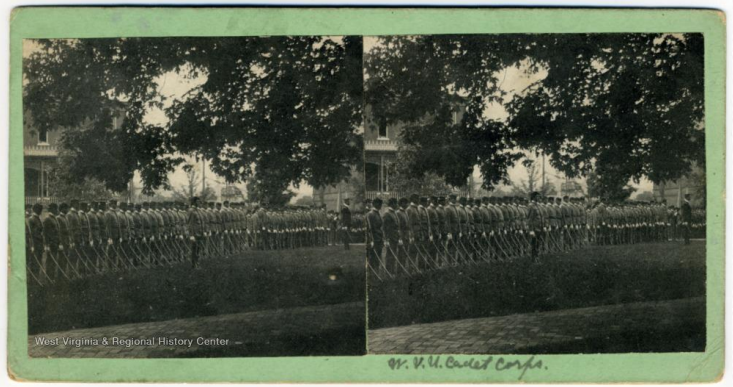
# Young Man Holding Camera, Foxburg, PA, circa 1900

The camera box rests on the ground next to the boy. This image comes from the James Edwin Green collection. Green was a photographer in St. Marys, West Virginia as well as in Foxburg.

# Stereographs


Stereographs are card mounted photographs made through assorted photograph processes, that offer two images placed side by side on a single card. The images are usually made simultaneously by a camera with two lenses placed adjacent to each other so as to recreate the view that a person would have looking through two eyes. When viewed through a special viewer—the stereoscope—stereographs exhibit a three-dimensional effect.

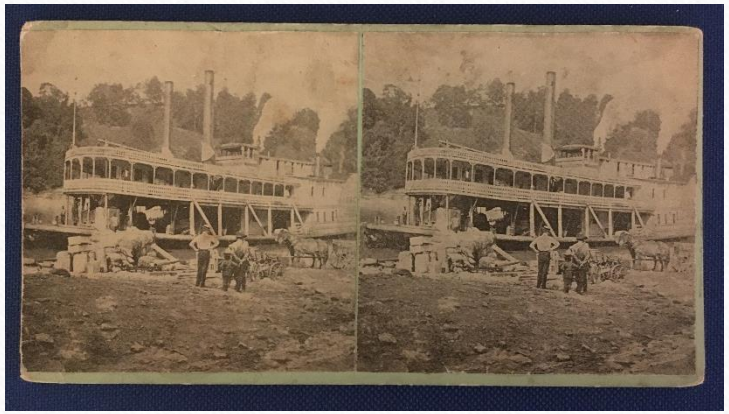


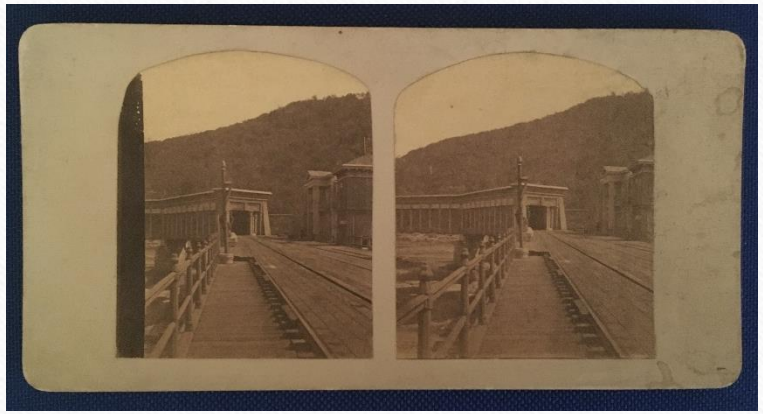


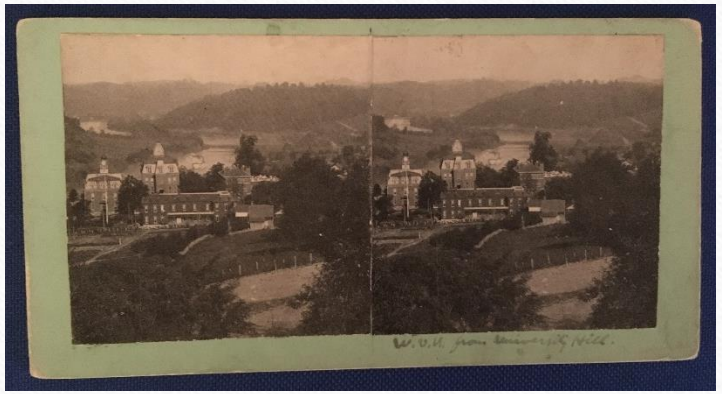


While early stereographs were made using both daguerreotypes and ambrotypes, the introduction of the albumen print increased the format's popularity during the 1850s. The popularity of CDVs minimized interest in stereographs during the 1860s, but their popularity resurged after the card craze died down. The stereoview remained in common use well into the 20th century.


# Stereographs





# Stereoscopes

Handheld Stereoscope, 1861 (left) - Oliver Wendell Holmes, father of U.S. Supreme Court Justice Oliver Wendell Holmes, Jr., was the inventor of the handheld and much more economical stereo viewer. The viewer has the same essential elements as the more elaborate tabletop viewer including two prismatic lenses and an easel for holding the cards.

Tabletop Stereoscope, patented circa 1865 (right) - This collapsible stereoscopic viewer is set up to view the stereocard resting on the easel shelf. Folded under the platform is a large magnifying lens. When the stereo viewer is folded down and the magnifying lens is raised, the stereocard is replaced on the easel with a single print for magnified viewing. The viewer is now converted to a graphoscope. The base has several notches to adjust the level of the viewers, and the easel holding the image can be moved vertically and horizontally.

# Virginia Deskins of Russell County, VA, circa 1905

Deskins is holding a stereoscope. She is a distant relative of WVRHC staff member Catherine Rakowski.