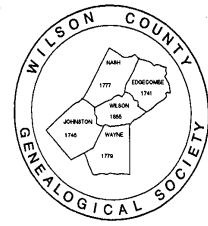


# TREES OF WILSON

*Wilson's Family Heritage*

Chronicles of the  
Wilson County Genealogical Society



February 2022

Volume 31 Number 2

## DAGUERRETYPE, AMBROTYPE, AND TINTYPE PHOTOGRAPHS

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Photographs often portray people, places and events. Three types of early photographs were daguerreotypes, ambrotypes and tintypes. These photographs captured a moment in time and sometimes created emotions or evoked feelings from the observer when viewed. Therefore, some genealogists, historians and others collect 19th century photographs.

French inventor, Louis Jacques Mandé Daguerre, introduced the daguerreotype, and it was popular from the 1840s until the 1860s. Daguerreotype images were made on a copper plate. The process began with a thin copper sheet with a silver coating on one side of the sheet. Before use, the silver coating had to be polished until it had a mirror finish. Next, the plate was placed into a dark box and treated with iodine and bromine vapors to produce a light sensitive compound on the silver surface. The sheet was then placed in a camera and a photograph was taken. The sheet was then developed using mercury fumes, then fixed using a solution of sodium thiosulfate and washed in water to remove any residual chemicals. Fixing prevented the silver compound from continually darkening. Lastly, it was mounted in a protective case.

Englishman Frederick Scott Archer invented the ambrotype process, and it was introduced in the United States in the early 1850s. It was an image made on a glass plate. The glass plate was first coated with iodized collodion, then dipped in a silver nitrate solution to make it light sensitive. After the plate was exposed, it was under developed and fixed, again fixing prevented the image from continuing to darken. The underexposed glass negative was placed against a dark background. The dark backing provided contrast and created a more visible image.

In 1853, French inventor, Adolphe Alexandre Martin, developed the tintype process. In 1856, it was patented by Hamilton Smith in the United States. The tintype was introduced while daguerreotypes and ambrotypes were still in use.

Tintypes were not actually made of tin but a thin sheet of iron. Some have suggested the name 'tintype' because tin snips were used to cut and trim the metal sheets. However, some suggest the name, "tintype," may have been used to describe an inexpensive metal. Tintypes were easier to make and more durable than daguerreotypes which required mounting in a protective case.

Tintypes, also known as a ferrotype [ferro, Latin for iron], were made on a thin sheet of metal coated with a dark lacquer containing a light-sensitive compound. It was similar to the daguerreotype process. After the plate was exposed, it was developed and fixed.

The sizes of the three types of photographs varied and were described as plate sizes. A full metal or glass plate measured 6.5 x 8.5 inches; half plate 4.25 x 5.5 inches; quarter plate 3.25 x 4.25 inches; sixth plate 2.75 x 3.25 inches; ninth plate 2 x 2.5 inches; and a sixteenth plate 1.5 x 1.75 inches. The most common size was the sixth plate, 2.75 x 3.25 inches. All three types of photographs were direct positive images. In other words, the image on the plate was reversed.

Figure 1 on the next page is an original tintype image depicting an unidentified African-American lady with a ring on what appears to be her right hand. Figure 2 illustrates the corrected reversed image. The lady was actually wearing the ring on her left hand.

*(continued on page 17)*

Also, in order for the subject being photographed to remain steady, a headrest was sometimes placed behind the subject's head. However, the headrest was often not visible in the photograph. Headrests were used because exposure times could range from five to twenty-five seconds, and any movement during exposure time would result in the image being blurred or out of focus.

To determine if the image is a daguerreotype or tintype, a magnet can be used. Tintypes are magnetic while daguerreotypes are nonmagnetic. Of course, the ambrotype is on glass. The three types of images, daguerreotype, ambrotype, and tintype, should be protected from ultra violet radiation because light will eventually destroy the image.



Figure 1. Original tintype image. The ring is on the lady's right hand. It is a mirror image.



Figure 2. Computer image software was used to correct the mirror image. The ring is on her left hand.

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