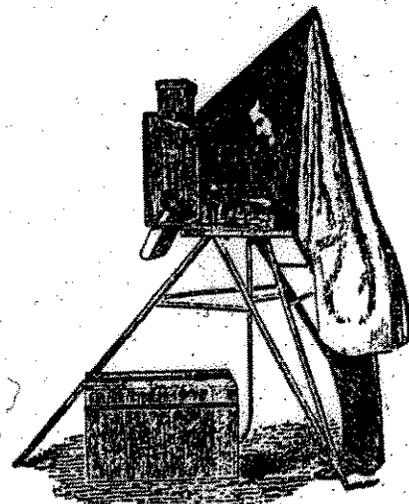


THE WET-PLATE COLLODION PROCESS

Was first introduced in 1851 by the Englishman, Frederick Scott Archer. By 1860, it had become the universal photographic method employed by virtually all photographers here and abroad. The wet-plate process continued to be the state of the art till about 1880 when manufactured gelatin dry plates came into wide spread use.

It is called wet-plate because the plate, be it glass for negatives or ambrotypes, or metal for ferrotypes, cannot be allowed to dry during the entire procedure. Once the plate has been coated with the clear volatile, viscose collodion solution, it must be immediately sensitized, exposed in the camera, developed, fixed and rinsed before the plate dries. The plate loses sensitivity and usefulness once it begins to dry. The whole wet-plate process must be performed for each plate taken. There is no shooting of pictures now and developing them later. In a sense, the wet-plate photographer makes his own film and processes it on the spot. Thus, it is an absolute necessity that he have a darkroom very close at hand. Within it he can work under amber-red light as wet-plates are only sensitive to blue light.

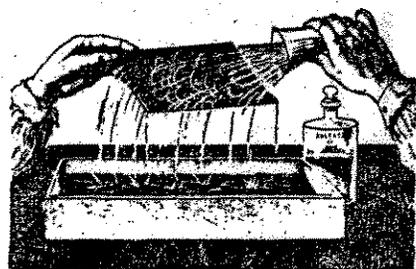


A type of portable darkroom

Making the wet-plate:



Coating the plate



Developing the plate

1. A piece of glass is thoroughly cleaned and polished. If one is using a ferrotype plate this step is omitted.
2. Holding the plate by the tips of the fingers in a horizontal position, the collodion is flowed over the surface to form a smooth even coating.
3. In the darkroom the coated plate is quickly put into a bath of silver nitrate solution and allowed to soak for several minutes. It is withdrawn from the bath, now light sensitive, and while still wet put into a light proof plate holder.
4. The plate holder is then taken to the already aimed and focused camera. The dark slide is removed and the exposure, generally about five seconds, is made simply by removing and replacing the lens cap of the camera. The dark slide is replaced and the holder is taken back to the darkroom without delay.
5. The plate is removed from its holder and developed by pouring an acidic iron sulphate solution over its surface. When the plate is judged to be fully developed it is rinsed in clean water.
6. The plate is put into a solution of hypo or potassium cyanide to dissolve the remaining unaltered silver salts. It is then washed in clean water thoroughly.
7. Over a gentle flame the fixed plate, held between thumb and forefinger, is rapidly moved until dry and while still warm it is usually varnished.

The Ambrotype 1852-1865

Made by the wet-plate collodion process, it is simply an underexposed glass plate negative. When it is placed against a dark background it appears as a positive image. The ambrotype plate is either backed with a dark material or more directly the plate itself is made of dark colored glass, giving a dark background automatically. The image is reversed.

Unlike albumen prints from wet-plate negatives, which co-existed with it, the ambrotype required more than one sitting for more than one image. Nevertheless, it could be made much more quickly and for a single small portrait usually more cheaply.

Ambrotypes were often varnished to help protect the image surface and were nearly always sold in cases or frames. Thus, the ambrotype is extremely durable and has well withstood the test of time.

The Ferrotype 1856-1900

Also called melainotype or more often tintype, was America's first major contribution to the art of photography. Made in the same way as the ambrotype except that a thin piece of black enameled (japaned) iron was used in place of glass. Like the ambrotype, the image is reversed.

Ferrotypes were made from thumbnail size to as large as 11" x 14". With the introduction of multi-lensed cameras with sliding backs in the early 1860's, the more typical small sizes were made in volume. These were usually mounted in card mounts of the then popular carte-de-visite size.

Being on a metal plate with its surface varnished, ferrotypes have proven to be very durable.

The ferrotype superseded the ambrotype by the end of the Civil War and went on to become 19th Century America's all time favorite quick picture.