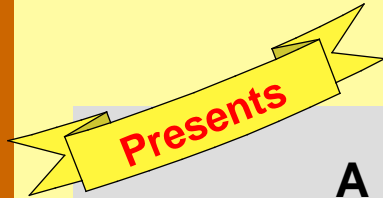


# Historic Camera

.com



**A Short Tour of**

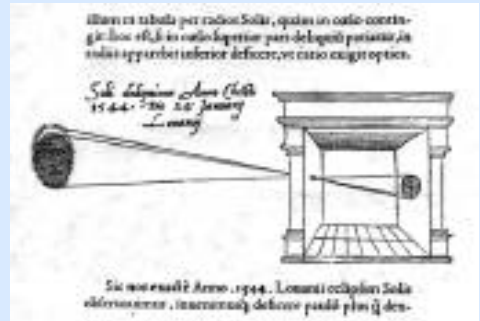
*The Illustrated  
History of Photography*

# 1490

The Camera Obscura, translated as dark room, dates back to the Chinese philosopher Mo-Ti in the 5th century BC. However it is



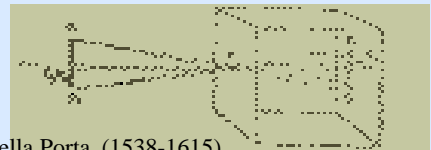
documented by Leonardo Da Vinci in his 1490 writings. Camera Obscura is the physics that a very small hole in a box in a very dark room on a bright day will direct light to create an image, that is outside the hole, turned upside down.



Camera Obscura, Reinerus Gemma-Frisius, 1544

# 1558

Italian Scientist Giovanni Battista Della Porta suggested in his “*Magiae Naturalis*”, the applications to portraiture, landscapes, and the copying of other paintings. He details specified construction, that a conical hole be installed in the shutter of a darkened room and that the image would appear upside down and reversed from left to right. He even address benefits from lens. With a lens, he wrote, "You will see everything clearer, the faces of men walking in the street, the colors, clothes, and everything as if you stood nearby."



Della Porta, (1538-1615)

# 1614



Angelo Sala (1576-1637)

Angelo Sala, a Dutch scientist began experimenting with substances called silver salts and in a pamphlet published in 1614, he stated that when powdered silver nitrate is exposed to the sun, “it turns as black as ink”.

# 1661

Many chemist contributed to the advancement of the discovery that certain materials change color when exposed to light.

Robert Boyle, a founder of the royal society, reported that silver chloride turned dark due to exposure, at first thought due to air. Boyle is known today for “boyles law” which states that the volume of a gas at constant temperature is proportional to its pressure.



Robert Boyle (1627- 1691)

# 1727

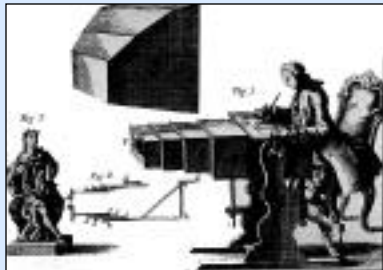
Johann Heinrich Schulze, a professor of anatomy, After a number of experiments discovered that silver salts, specifically a piece of chalk dipped in silver nitrate turned black from white when exposed to the sun. The unexposed side remained white. He experimented creating crude photographic impressions, but eventually it all turned black due to exposure.



Johann Heinrich Schulze (1687-1744)

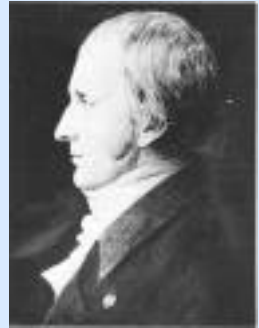
# 1800

By the early 1800's, the optical process from the "camera obscura" and chemical process from materials changing when exposed to light were beginning to be combined to form the basis for the discovery of the photographic process.



# 1806

The first well-documented attempts to produce photos using light sensitive materials in a camera were those of Thomas Wedgwood. Assisted by Sir Humphrey Davy, Wedgwood started experiments in 1795 and described his work in an 1802 published paper entitled “An Account of a method of copying Paintings upon Glass, and of making Profiles, by the Agency of Light upon Nitrate of Silver” Although he made remarkable progress, he failed in keeping the image permanent. he called the images “sun prints”.



Wedgwood, (1771-1805)



# 1827

The first successful picture is produced by Nicéphore Niépce with over an eight hour exposure time.



It was a photo of a view from the Niépce family house in Gras, France. Niépce calling his pictures “Heliographs” or sun drawing.

# 1829

Joseph Nicéphore Niépce and Louis Jacques Mandé Daguerre go into a 10-year partnership partnership after Daguerre



Daguerre, ( 1787-1851)

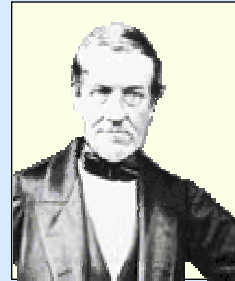


Niépce,(1765-1833)

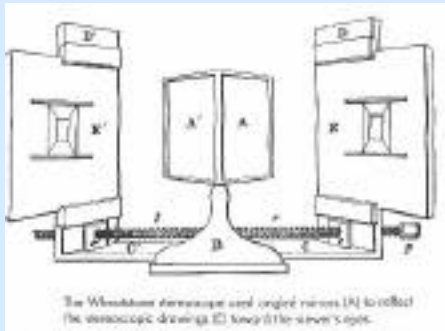
discovers a method to shorten exposure time to a half hour. Nicéphore Niépce dies four years later and Daguerre carries on to invent glass plates and discovers that an image can be made permanent by immersing it in salt.

# 1832

The London Professor, Sir Charles Wheatstone invents a mirror stereoscopic device. He presents his findings to the London royal society in 1833 in a lecture entitled "On Some



Wheatstone (1802-1875)



The Wheatstone stereoscope used angled mirrors (A) to reflect the stereoscopic drawings (K) toward the viewer's eyes.

Remarkable and Hitherto Unobserved Phenomena of Binocular Vision". in 1838 Wheatstone published his findings and had his first public demonstration to the Royal Society.

# 1835

The earliest or first permanent paper negative known is produced by William Henry Fox Talbot . Its a

small 1" x 1" size and of poor quality depicting “the lattice window in the South Gallery”, Lacock Abbey. However, unlike the daguerretype images, it is reproducible. Created from paper soaked in silver chloride and fixed with a salt solution.

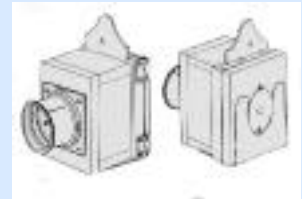


# 1839

William Henry Fox Talbot publishes a paper to the Royal Society on his invented process that creates permanent paper negatives. He calls it "Calotype" process, which allows for multiple printings, based on a paper negative. It is however of lesser quality than the Daguerreotype. Even though the Daguerreotype enjoyed more success during the early days of photography, the Calotype system was the true fore runner of today's modern photography process.



Talbot, (1800-1877)



Talbot's 1839  
Calotype Camera

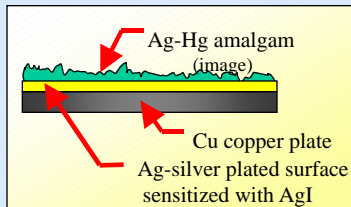
# 1839

In 1837 Daguerre portrait creates his first Photo. He publicly publishes details of his process and proudly names the process, “Daguerreotype”. A high quality, expensive process producing a single positive image



onto copper plate coated with silver. The drawback is that it is not reproducible. The French Government

buys the rights to Niépce and Daguerre’s photo process.



# 1839

The Image capture process is then introduced to the public by Sir John Herschel in a lecture to the Royal Society. He is credited with naming the process "Photography" to the public, even though a few before him used it.

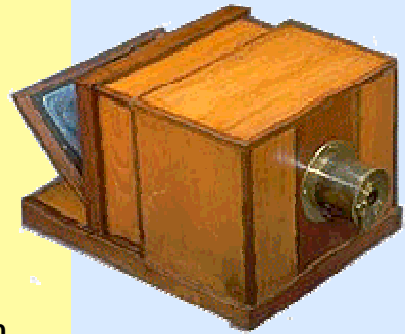


Herschel, (18xx – 18xx)



# 1839

The first commercially-manufactured camera was the Giroux Daguerreotype Camera. It was designed by Daguerre and made by Alphonse Giroux, in Paris, France. It is a double box camera based on Daguerre's work in perfecting the process with experimental apparatus. It uses a 15 inch f/15 achromatic landscape lens manufactured by Chevalier, a Parisian optician and instrument maker.



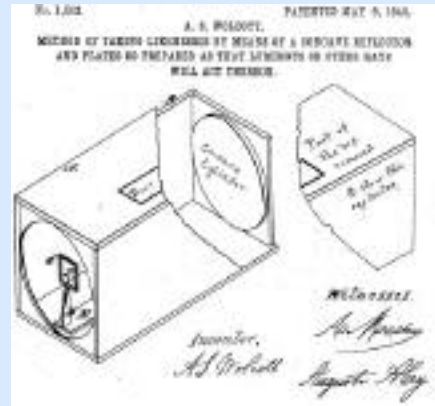
Giroux Daguerreotype Camera  
( 1839 - 1851 )



# 1840

American New Yorker, Alexander Wolcott, with the assistance of John Johnson, are the first to receive a patent for

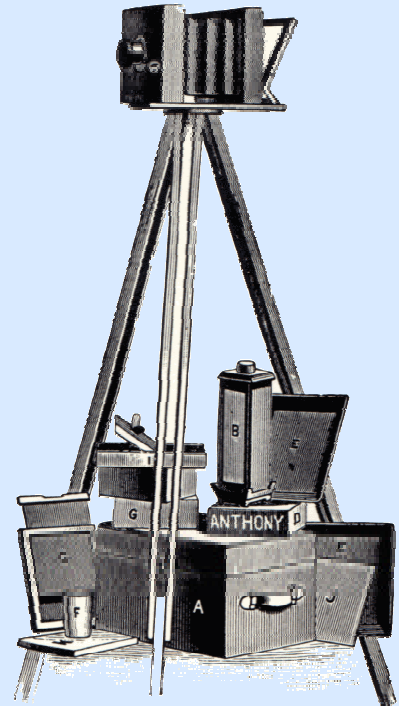
their daguerre type camera on May 8, 1840. Wolcott also opened a "Daguerran Parlor" in New York, which is considered to be the earliest known photography studio.



(Wolcott 1804-1844)

# 1842

Edward Anthony starts the first American camera manufacturing company “E. Anthony”. His brother Henry joins him in 1852 to form “E. H. Anthony”, the largest supplier of photographic materials in America. They later merge with the Scoville Co. and the two names were combined and abbreviated to Ansco.



# 1843

Joseph Puchberger a chemist from the city of Retz, Austria, patented on a swing lens panoramic camera with a hand crank, entitled 'Ellipsen Daguerreotype'. It used curved Daguerreotype plates 19 to 24 inches long. The camera had an 8-inch focal length lens and produced a view image of around 150 degrees. His associate, Wenzel Prokesch also was named on the patent at the end of the description with the notation 'optics and mechanics'



# 1844



William Henry Fox Talbot publishes a photographically illustrated book entitled "The Pencil of nature." About 150 books were published. The book describes the trials

and tribulations of Talbot's first experiments with photochemistry and he defines some of the characteristics of a camera's vision.



The Pencil of nature c1844:  
Photograph of a Haystack

# 1845

Mathew B. Brady begins to photograph famous persons of his time, including Daniel Webster, Edgar Allan Poe, etc. He then goes on to become the most celebrated civil war photographer.



Brady, (1822 -1896)

# 1851

Frederick Scott Archer introduces the "Collodion" process. Collodion, is a thick and syrupy liquid, that is made by dissolving nitrated cotton in a mixture of alcohol and ether. This wet plate method proved to be a faster process, reducing exposure times to two or three seconds, but it required a considerable amount of equipment on location. The next year, Archer introduces Ambrotypes based on collodion. Ambrotypes produced high quality and much cheaper image than the Daguerreotypes but the process was very different.



# 1853



Martin, 1824-1896

The American tintype, also known in Great Britain as a ferrotype, is introduced by Frenchman Adolphe Alexandre Martin. It produces affordable images on cheap metal sheet, not tin, instead of glass, using the wet colodion positive process to the masses. The results were often low quality, so studios tended not to use tintypes. However, there rose many street vendors that used tintypes for early photo services.

# 1853

John Jacob Bausch opens his spectacle opticians business improving spectacles from his brother in Germany, and borrowing from one friend or another and paying back each loan as it came

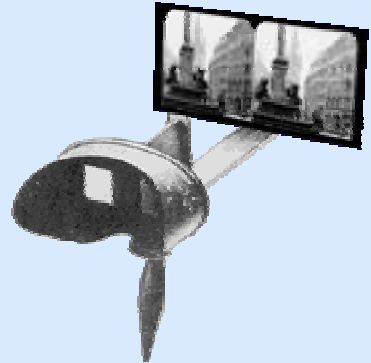
due. Henry Lomb, a cabinet maker and close friend who gave Lomb his first loan based on a gentlemen's deal that should the business become successful that Lomb would be a full partner. Lomb shortly decides to join Bausch selling spectacles.





# 1861

The American physician Oliver Wendell Holmes (1809-94) develops a lightweight and inexpensive, hand held stereoscopic viewer. The "Holme's Stereoscope". It becomes one of the world's most popular models.



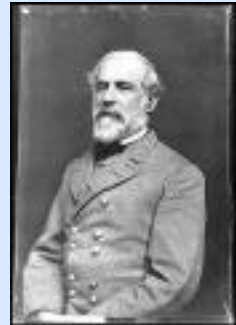
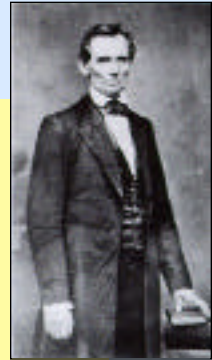
# 1861

Adolphe Bertsch invents the first sub-miniature camera called the *Chambre Automatique de Bertsch*. Bertch's Automatic Camera had a fixed focus lens with a view of less than one inch in diameter and so it used a very small one and a half inch wet collodion plate.



# 1861

Mathew Brady begins the documentation of Civil War photographic history providing an insightful and informative record for future generations. Other photographers like George Barbard, Alexander Gardner, Andrew Russell, and Timothy O'Sullivan also carry on the legacy.



# 1866

Walter E. Woodbury invents the “Woodburytype”, a photo-mechanical process like the callotype to create true continuous-tone images by the use of a gelatine and metal mold. The process was patented in 1864. It was widely used until the turn of the century. The quality of is excellent, lasting and sharp without grain. However, The technique was difficult, couldn't be automated and that the pre-press preparation of the lead printing plate required an enormous amount of hydraulic power the method became obsolete in the late 19th century.



# 1871

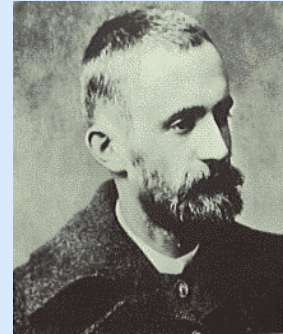
Dr. Richard Maddox discovers the use of Geletin instead of glass as the basis for the photographic plate which led to the development of the dry plate process. For the time, this was the best and preferred process.



Maddox (1816-1902)

# 1880

In 1880 Eastman begins to commercially manufacture dry plates following his emulsion-coating machine invention in 1879 enabling the mass-production of photographic dry plates. This is the beginning of the Kodak empire with the launch of the Eastman Dry Plate Company.

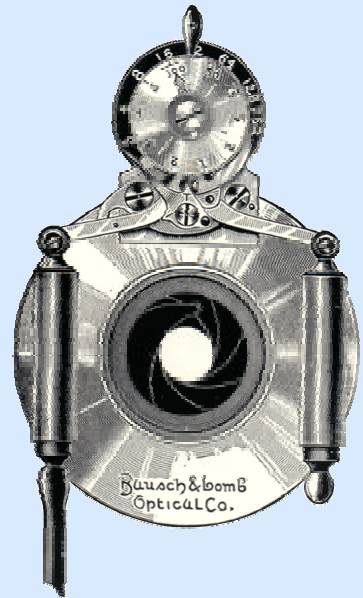


Eastman (1854-1932)



# 1883

Bausch and Lomb began making photographic lenses, and five years later, in 1888, they began to manufacture shutters. B & L dominates the market and acquire a sole north American agreement with Zeiss lens.



Diaphragm Shutter

# 1884

The Eastman Kodak Co. introduces flexible film. Kodak spools available with either 50 or 100 exposures

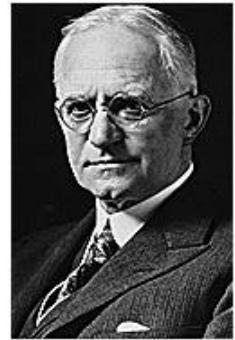


The following year they introduce “Eastman American Film” as the first transparent darkroom film negative.



# 1888

George Eastman then introduces the "Kodak" box Camera for the amateur market. It is loaded with 100 exposures on a film roll for \$25. It is simple to operate with a three step



George Eastman (1854-1932)

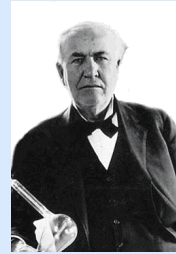
process. Once



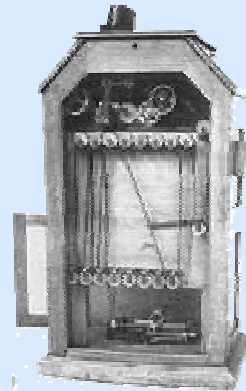
exposed, the camera and the film are sent back to the Eastman Dry Plate and Film Co. for developing. Features a wooden box covered in morocco leather with roll holder and revolving exposure indicator.

# 1893

Thomas Edison commissions W. K. L. Dickson to invent a motion-picture camera in 1887 and in 1893 Dickson produces the Kinetograph camera. This device ensured intermittent but regular motion of the film strip with a regularly perforated celluloid film strip to ensure precise synchronization between the film strip and the shutter.



Edison (1847-1931) Dickson (1860-1935)



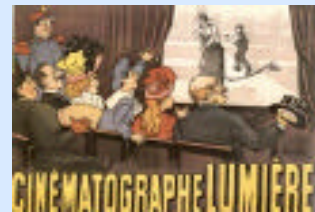
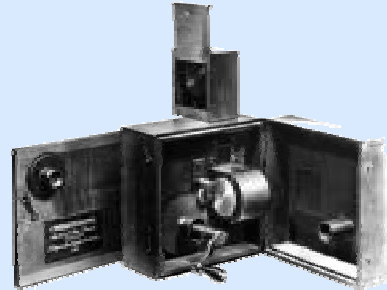
# 1894



A. Lumière (1862-1954)

L. Lumière (1864-1948)

**Louis and Auguste Lumière invent the Cinématographe in Lyon, a combination camera-projector that can project moving images onto a screen.**



# 1904

The Cirkut camera was patented in 1904. It used large format film, ranging in width from 5" to 16" and was capable of producing a 360-degree photograph measuring up to 20 feet long. Both the camera and the film rotated on a special tripod during the exposure.



John A. Dick with Cirkut camera used for taking panoramic photographs.

(Courtesy of Hagley Museum and Library)

To be continued...