

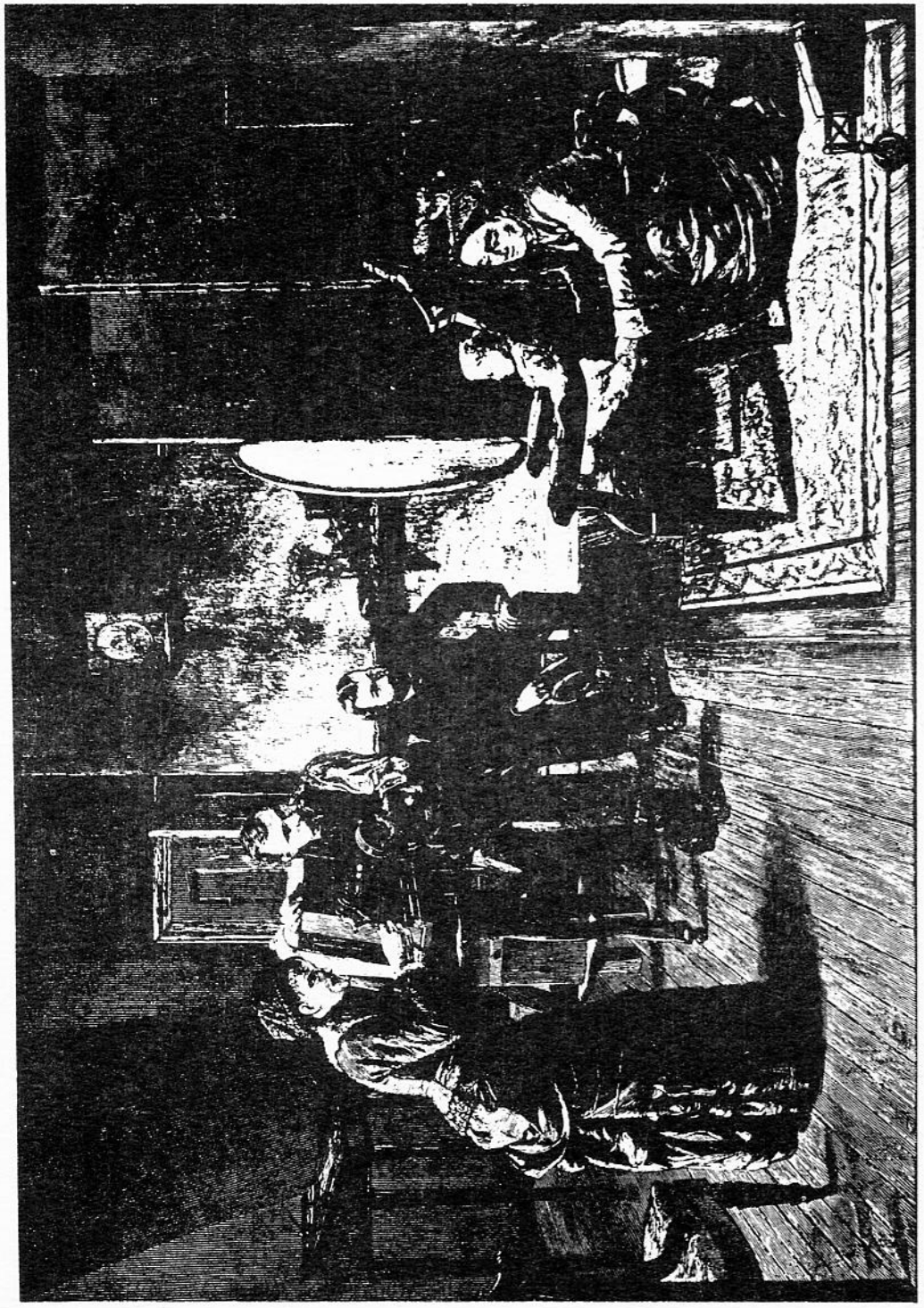
THE NEW DAGUERREIAN JOURNAL:

Devoted to the Daguerreian and Photogenic Art
Also embracing the Sciences, Arts, and Literature



Daguerre

SELF-CONSCIOUS





The New Daguerreian Journal

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BROTHER



JONATHAN

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FOURTH OF JULY, 1848.

OFFICE 15 SPRUCE ST. NEW-YORK.

Engraved according to an Act of Congress, in the year 1846, by James H. Thompson, in the Clerk's Office of the District Court for the Southern District of New York.

PORTRAITS OF DISTINGUISHED AMERICAN STATESMEN: FROM RECENT DAGUERRETYPES BY PLUMBE.



THOMAS H. BENTON.



HENRY CLAY.



JOHN C. CALHOUN.



DANIEL WEBSTER.

JOHN PLUMBE, JR.
by Floyd and Marion Rinhart

Outstanding among photography's pioneer daguerreians was John Plumbe, Jr.—a man of great energy—a dreamer, who within photography's first few years, from 1840-1846, had established a chain of daguerreian galleries in United States and two abroad. Before entering the photography field in 1840, Plumbe had already established himself, historically, as a man of great vision.

Plumbe was born in Wales in 1809 and emigrated to America at the age twelve. In 1831, he worked on a survey to locate a railroad route across the Alleghenies, in Huntington County, Pennsylvania. The following year, Plumbe was superintendent for the Richmond, Virginia, to Roanoke, North Carolina, railroad. This was in the pioneering days of railroading when only about one hundred miles of track had been laid in America.

In about 1836, Plumbe went to Dubuque, Iowa, and during the next three years became a landowner and an author. His book, *Sketches of Iowa and Wisconsin* was published in 1839. Also during this period Plumbe was a correspondent, writing under the pseudonym "Iowian," for many leading newspapers—New York, Boston, Philadelphia, Washington, Cincinnati, and St. Louis. Most important, however, in the year 1836, John Plumbe first advocated a railroad from the Atlantic to the Pacific! He issued a pamphlet proposing a railroad from Lake Michigan to Oregon, and on March 31, 1838, a convention was called in Dubuque, to discuss the subject.

Through the help of George Wallace Jones, delegate to Congress from the Territory of Wisconsin, Plumbe did receive \$2,000 from Congress as an appropriation for surveys. In 1839, he secured a memorial from the Wisconsin legislature, addressed to Congress, asking that the survey be continued West of the Mississippi. Mr. Jones recalled later than when he presented Congress with Plumbe's visionary petition for a railroad to the Pacific, it "produced a great laugh and hurrah in the house, members singing

out to me that it would not be long before my constituents would ask Congress to build a railroad to the moon."

Plumbe, meanwhile, had conducted the surveys using his own funds. In 1840, he went to Washington to persuade Congress as to the feasibility of his projected transatlantic railroad, but his ideas were considered wild and extreme.

During the time of Plumbe's visit to Washington, the new art of photography was a subject of considerable interest. Perhaps during his stay in Washington, where the nation's notables met, Plumbe conceived another great vision. Would not portraits of important people be soon in demand? And, would not the average American soon want his exact image recorded on the brilliant silvered copper plates?

Little is known about Plumbe's early introduction to the art in 1840, but he did have a camera constructed during the year by J. S. F. Huddleston, Boston instrument maker. By March of 1841, Plumbe was firmly settled in Boston as a "professor of photography." The Boston Advertiser carried the following advertisement in March, 1841:

Mr. Plumbe, Professor of Photography, having at length succeeded in so far improving his apparatus, as to be enabled to produce a perfect photographic miniature in any weather, and consequently, without using direct rays of the sun, proposes to instruct a limited number of gentlemen in the beautiful art, who will be furnished with complete sets of improved apparatus, by means of which any one may be enabled to take a likeness in an ordinary room without opening a window or requiring any peculiar adjustment of light. Hitherto it has been generally supposed that sunshine and an open window were indispensable to the production of Daguerreo miniatures, but an important improvement just perfected proves this a mistake. The new apparatus costs only one-half the price of the other and furnishes the ability of the possessor the security of independence in a profession as honorable, interesting and agreeable as

any other, by the expenditure of a mere trifle and a few days application. Can any other pursuit in life present the same advantage in furnishing the means of gentlemanly support, not to say fortune. Miniatures taken in beautiful style—terms \$3.00—Daguerreo Rooms, Harrington Museum, 75 Court St.

Plumbe must have trained his operators well because many of the existing early daguerreotypes which bear the "Plumbe" stamp on the framing mat are sharply focused, well-posed, and are outstanding examples of early photography. By May of 1841, Plumbe called his Studio "United States Photographic Institute."

In 1842 Plumbe purchased the patent rights for coloring daguerreotypes from Daniel Davis, Jr., Boston, who was another of photography's early experimenters. That Plumbe quickly took advantage of the new innovation is evident because, in the year 1843, he greatly expanded his operations. Plumbe advertised in this year as "Plumbe Daguerrian Gallery of Patent Colored Photographs," listing six studios: Albany, N.Y., Boston, New York City, Philadelphia, Saratoga Springs, and Baltimore. The advertisement boasted that "The Proprietor ... is now enabled to produce **Colored Photographs** the superiority of which is so great as to defy all attempts at competition."

Plumbe also advertised, along with his photograph gallery, a side business which he called "Plumbe Patent Electro-Gilding and Silvering Establishment." This operation was connected with all of his galleries except Saratoga Springs.

In addition to his photography studios, Plumbe had early established depots in New York and Boston for the sale of photographic supplies and cases. Plumbe was one of the first manufacturers of the wood-frame, leather-covered daguerreotype cases, from about 1841-1847. The cases which bear his label are beautifully designed and well-made. Two of his known artistic cover designs are "The Grecian Urn" and "Basket of Flowers."

Plumbe had from the very beginning hired the best operators for his various photography enterprises, and

his chain of daguerreian galleries continued to grow. **The Republican**, a Petersburg, Virginia, newspaper, carried a Plumbe advertisement on October 1, 1845, which listed 17 galleries—New Orleans, Washington, D.C., Baltimore, Philadelphia, Saratoga, N.Y., Louisville, Ky., St. Louis, Mo., Dubuque, Iowa, Albany, N.Y., Portland, Me., Newport, R.I., Cincinnati, Ohio, New York City, Boston, Paris, France, Liverpool, England, and Petersburg, Virginia.

Plumbe, always a firm believer in advertising as a means of promoting his enterprises, announced in 1846 that "Plumbe's National Daguerrian Gallery and Photographic Depots" had been awarded eight medals by institutes in Massachusetts, New York, Pennsylvania, and Ohio for the "most beautiful colored daguerreotypes art and for the best apparatus ever exhibited."

A New York City advertisement in 1846 claimed that Plumbe's enterprise as the "first in the world, employing 500 persons, having a large manufacturing department supplying the world." The advertisement continued, "The Gallery, and the lounge is free, frequented by the elite of the city who find it an agreeable resting place." The Gallery, it was said, contained a vast collection of the most perfect specimens of the art of photography among which were portraits of many of the country's most distinguished people, including the president, vice-president, officers of the cabinet, army, navy, senators, members of Congress, judges, clergymen, lawyers, authors, actors, and others. "Above the Gallery are numerous suites of rooms appropriate to the use of sitters who secure the use of privacy and dispatch in having their likenesses executed." One of the suites of rooms was described as being "fitted to take groups of 50 or more people in one picture, each being in the same light as the other and being so arranged as to remove entirely the disagreeable light upon the eye and at no time does the sun shine on this part of the building—the soft northern light being admitted through the roof, a mode of obtaining it which from experiment, proves to be the only way in which a large group can be made in this art."

Plumbe advertised in **The Great Metropolis** for

1846, sixteen galleries (the Boston gallery not listed) as follows: New York City, Philadelphia, Baltimore, Washington, D.C., Alexandria, Va., New Orleans, Saratoga, N.Y., Paris, France, Petersburg, Va., Cincinnati, Ohio, Louisville, Ky., Harrodsburg, Ky., Lexington, Ky., St. Louis, Mo., Dubuque, Iowa, and Liverpool, England.

Plumbe brought his knowledge of authorship into his promotion of the daguerreotype when he began promoting his collection of portraits of famous people by publishing a magazine, **The National Plumbeotype Gallery**, copyrighted in 1847 as National Publishing Co. Plumbe hired artists to copy original daguerreotypes on a lithographic stone, so that printed lithographs could be made. Plumbe called them Plumbeotypes and he claimed to have discovered a way of transferring copies of daguerreotypes to paper. Actually Plumbe was not the first pioneer daguerreian to do this. In 1843, Edward Anthony of the firm "Anthony, Edwards and Co.," owners of a New York City photography studio, published a "very excellent likeness of the Hon. Theodore Frelinghuysen." According to the **New-Mirror**, in 1843, "This we believe, the first really successful effort to engrave from a daguerreotype...and we welcome it as another evidence of our progress in the art, as well as of the volumes of the National Miniature Gallery now in progress of completion by these gentlemen."

Although Plumbe was not the first to publish the likenesses of important people, he was actually promoting a nationwide formation of literary clubs which had as an inducement to join, an extra plumbeotype, per volume, to the founders. His price for his new series called "Pictorial Work of National Plumbeotype Gallery" was \$1.50 for one month with 33 pictures and for one year with 313 portraits and portfolio, \$15.00. Among the prominent portraits taken from daguerreotypes were Houston, Van Buren, Calhoun, Adams, Rev. Dr. Dewey, Mrs. Mowatt, and Col. W. W. Seaton.

This would be John Plumbe's last great promotional scheme in the photography field. By 1847, according to the listing in his publication, **The Plumbeian**, Plumbe's galleries had dwindled to

eleven--Philadelphia, New York City, Boston, Baltimore, Richmond, Va., Washington, D.C., Petersburg, Va., Cincinnati, Ohio, St. Louis, Mo., Paris, France, and Liverpool, England. Plumbe was forced, because of financial conditions, to sell out his galleries to pay his creditors sometime in 1847. Whether he had overreached himself in his various enterprises or whether as Marcus A. Root, prominent daguerreian and later historian of the art, wrote--"his operators stole him blind"--is not known. By 1847, photography had become a highly competitive field in all branches of the business.

Some confusion exists for the historian about the disposal of Plumbe's original Boston daguerreian gallery. The Boston city directory continued to list the gallery at the original address, 75 Court St., although from 1847, Richard Plumbe, John Plumbe's brother, is listed at this address until 1849 when he moved to the corner of Washington and Summer St. In 1850 Richard Plumbe is listed at 228 Washington St., Boston. However, the Boston directory, in 1850, carried a listing for "Plumbe's Daguerrian Rooms" at Plumbe's original address, 75 Court St. and this listing continued through 1854. Meanwhile also in 1850, the original gallery address at 75 Court St. is listed under the name Walter B. Eastman who, according to a later trade card, was the successor to the original Plumbe National Gallery. It is uncertain when Eastman purchased the gallery, probably it was sometime in the early 1850's. W. B. Eastman continued to be listed in the Boston directories from 1850 until 1859 at 75 Court St., with the exception of 1852 through 1853, when he is listed at 2 Blanchard Block Ct. At this address he also appears in the city directories as "Hadley and Eastman" in 1850 and 1851. To add confusion upon confusion, "Plumbe National Gallery" is listed in the directory for 1851 and 1852 at 228 Washington St. (same address as Richard Plumbe). To add another puzzling factor for the years 1851 and 1852, John P. Nichols is listed as trading in the name "Plumbe's Daguerrian Gallery" at the original address 75 Court St. **The Daguerreian Journal** in 1851 cites Nichols as being the proprietor of Plumbe's gallery from 1849-1851.

In 1849 Plumbe started overland to California. He made the trip by way of the South Pass, and his trip further convinced him of the possibility of a transatlantic railroad. Asa Whitney, another advocate of a transatlantic railroad in the 1840's, was promoting a northern route to the Pacific.

While in California, Plumbe continued to advocate his railroad dream, and he returned East to plead with Congress as to the feasibility of his plan. In 1850 he wrote an eight page memorial on the Pacific railroad, and in 1851 he wrote a 48 page "Memorial against Mr. Asa Whitney's railroad scheme." His caption title was "To the honorable the Senate and House of representatives of the U. S. in Congress assembled."

Response to John Plumbe's pleas was negative, and he returned to Iowa in the company of his brother Richard. Little is known about his life until on May 30, 1957 when the **Daily Express and Herald** recorded the "melancholy suicide." **The West Urbana Press** spoke of him: "Mr. Plumbe was about the first to introduce the daguerreotype art in this country--He was a gentlemen, an able writer, and a man universally respected. We give him the credit of being the first man who advocated the feasibility and need of a railroad to the Pacific."

GEMS OF POETRY

FADING OF THE PICTURES OF THE IMAGINATION.

Of the hues of life, the fate and play,
Should to the heart their solemn tale convey
Pictures of all granished with the tints of morn,
From thy bright realm, Imagination! born,
Rise early to the spirit's greedy eye,
Fair as the summer clouds that sail the sky.
Yet as the waves of Time by stealthy arise, —
Come the quick sorrow and the sad surprise;
E'en the bright helps that gilded youth, are gone,
And Hope's accessories leave us changed and lone!

W. G. Clark.



SEEING

Of all the senses, that of seeing is the most noble, commanding and useful. It enables us to perceive thousands of objects at a glance, with their forms, colors, and distance.

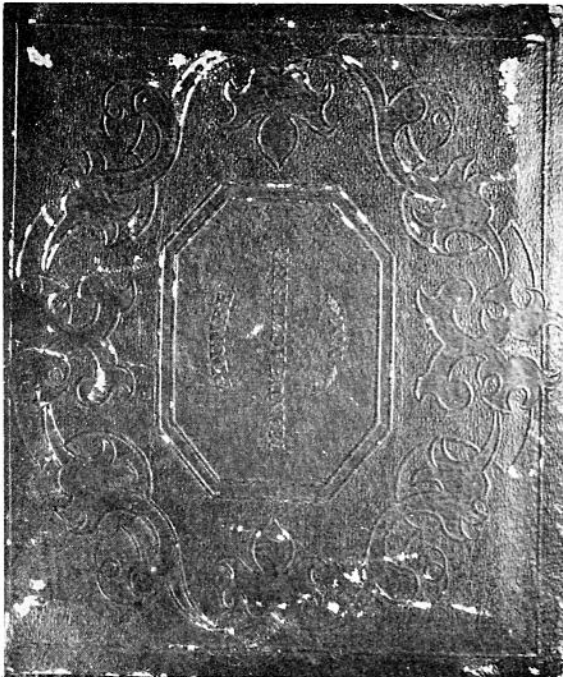
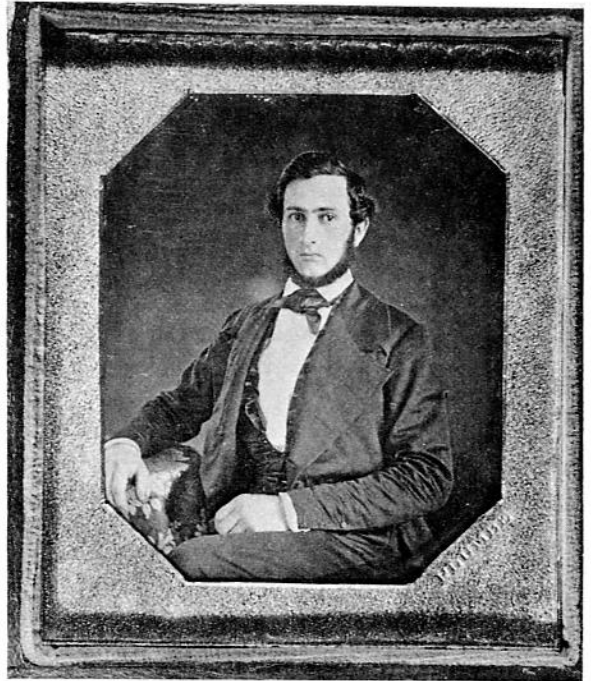
The mechanical structure of the eye is very curious, but I shall not describe it now. It is sufficient to say that light is the great instrument by which vision is performed. This is supposed to consist of innumerable particles, inconceivably small, which proceed in straight lines from every part of luminous or shining bodies. These fly with a velocity ten millions times as swift as a cannon ball, for they come from the sun to the earth in eight minutes! These rays of light enter the ball of the eye at the pupil; and at the bottom of a cavity in the ball, called the *retina*, a little picture is painted of every object placed before the eye. It is this little picture that enables us to see; and we see distinctly, or otherwise, as this is clear or obscure. A very curious thing is, that this picture represents everything reversed, that is, upside down. The reason why we do not, therefore, see things upside down, is a matter that has sadly puzzled the philosophers.

Credit: Parley's Panorama or Curiosities of Nature and Art History & Biography by S. G. Goodrich.

A PLUMBE THAT IS A PLUMBE IS A PLUMBE

This most recent addition to the Donald P. Lokuta collection is a classic example of how completely a daguerreotype may be identified.

At first glance, most experienced image collectors would recognize the new familiar embossed Plumbe design on the exterior of the leather case, but the identification process doesn't stop there. As you open the case to view the contents, you'll notice the plum colored silk lining (a Plumbe trademark) opposite the image. As was the custom of many daguerreotypists, the artist's name was stamped into the matte in the lower right hand corner, but the final surprise came after the cover glass and mat were removed. The plate had both a manufacturer's hallmark and a Plumbe stamp in opposite corners.



DAQUERREIAN

Once again the journal calls upon the unique collection of Mr. Herb Peck for the Daguerreian Image Gallery.

Should you visit the Pecks, you'll find that the dining room is no longer used for its intended purpose. Instead of a table there is a desk filled with collectables, and the walls (or rather book shelves) reflect the intense interest and dedication given to the hobby of collecting the portraits and views of U.S. military men and events of the civil war.



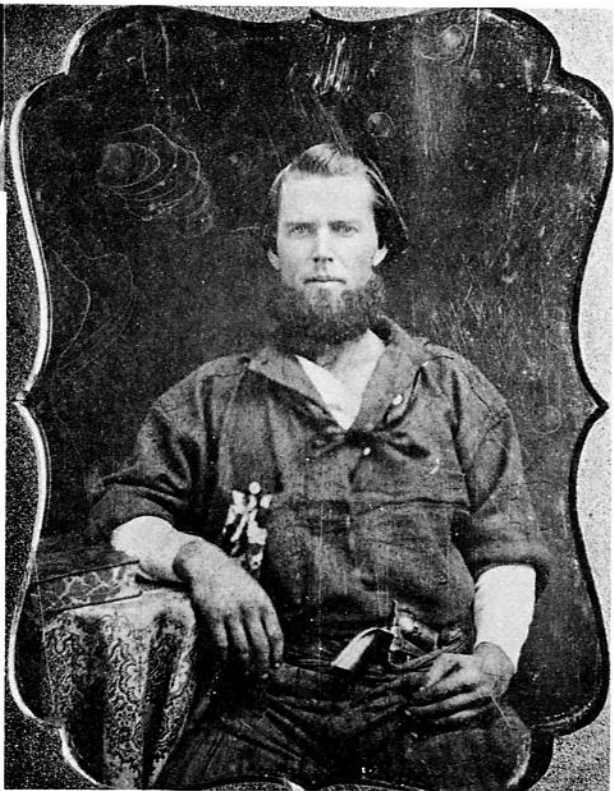
Herb is typical of most collectors, eager to show his personal prizes and discuss events and issues important to collecting, and while talking he is reaching into a new box or drawer to show just one more item to further boggle your mind.

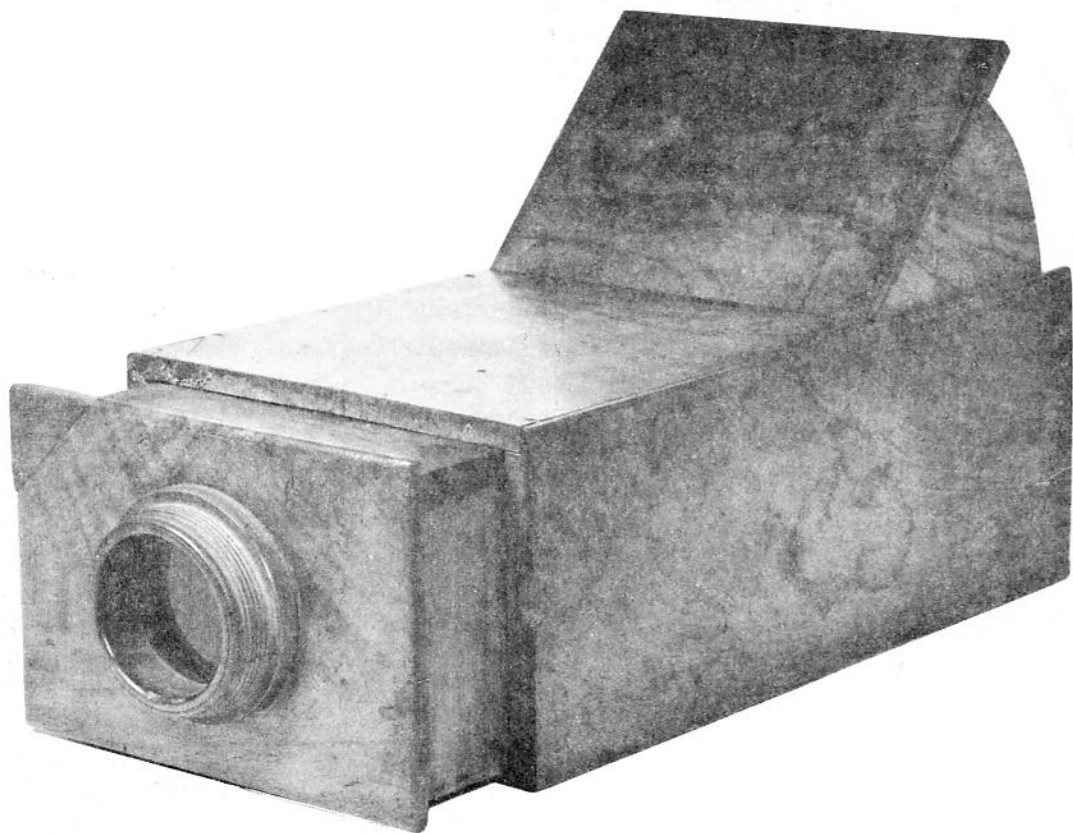
Herb would rather collect photography than eat, besides it's more fun to eat in the kitchen.

IMAGE GALLERY



- 1) ½ plate "Dag" Lt. 10th Infantry, U.S. Army
- 2) 1/6 plate "Dag" City guard militiaman
- 3) 1/6 plate "Dag" young hunters
- 4) 1/4 plate "Dag" a sailor or miner? with colt-revolver.





From the Donald P. Lokuta Collection

Basic statistics: a wood constructed camera obscura of the "box within a box" design with a simple meniscus lens, measuring 30 cm. long, 11 cm. high, and 17 cm. wide.

D A G U E R R E I A N

EQUIPMENT GALLERY

THE CAMERA OBSCURA

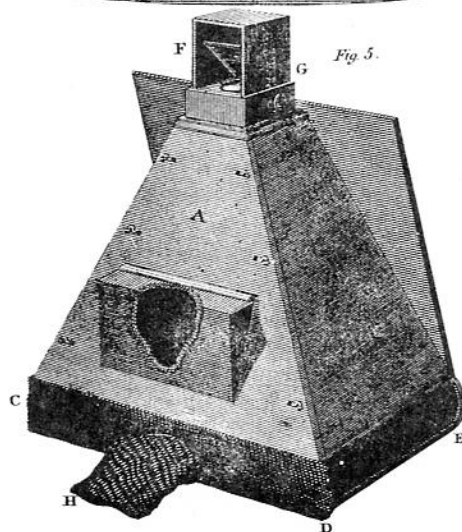
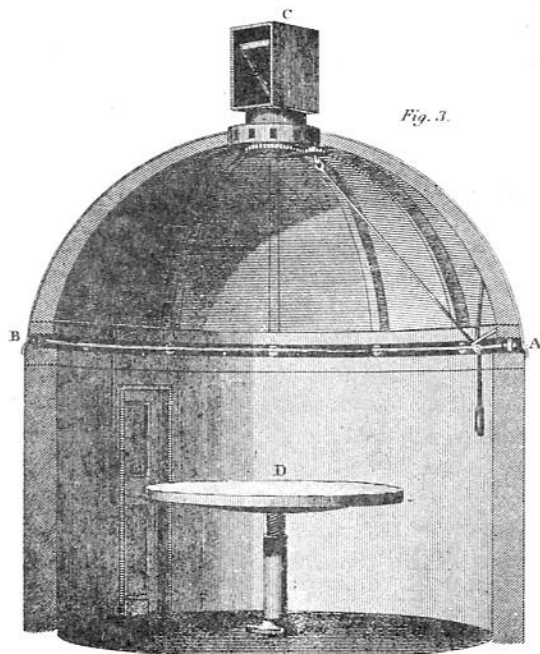
The camera obscura has been subjected to several design changes since those first descriptions by Aristotle, Ibn Al-Haitham, and Leonard da Vinci. Of the specific inventors we know very little, but the product changed through the centuries as did the needs of the artists that used them.

A popular design in the 18th century used an adjustable mirror in a collapsible box or tent structure in which the artist would insert the upper half of his body and trace the rather faint image as provided by the mirror.

The portable camera obscura illustrated is believed to be of an early design (1800-1810) because of the use of a wood retaining ring to secure the lens and the hand constructed jointery. The solid wood box style camera obscura was improved by the use of light weight materials and a new collapsible design as offered by Giroux of Paris.

Soon after the 19th century began, other mechanical and optical artist drawing aids, made their appearance, Wollaston's Camera Lucida, a beautifully small prism-optical device designed to clamp to a drawing board, and Chretien's Physionotrace machine for profile portraits. These devices were impractical for the common man because of the artistic skill required.

The camera obscura stood waiting in the wings for a hundred years until the chemistry of photography came of age.



THE PHOTOGENIC DRAWING - ITS INCEPTION AND DESCRIPTION

By Donald Peter Lokuta

Talbot, while vacationing in the scenic countryside of northern Italy met with little success in preserving the memory of his visit by means of sketches. His wish for a more detailed and exact image than his drawings could provide and a more permanent reminder than upon the "elusive tablet of the memory" was a long sought after dream of man.

He later recalled these early attempts.

One of the first days of the month of October 1833, I was amusing myself on the lovely shores of the Lake of Como, in Italy, taking sketches with Wollaston's Camera Lucida, or rather I should say, attempting to take them: but with the smallest possible amount of success. For when the eye was removed from the prism- in which all looked beautiful- I found that the faithless pencil had only left traces on the paper melancholy to behold. After various fruitless attempts, I laid aside the instrument and came to the conclusion, that its use required previous knowledge of drawing, which unfortunately I did not possess. I then thought of trying again a method which I had tried many years before. This method was, to take a Camera Obscura, and to throw the image of the objects on a piece of transparent paper laid on a plane of glass in the focus of the instrument. ...-fairy pictures, creations of a moment, and destined as rapidly to fade away. It was during these thoughts that the idea occurred to me...how charming it would be if it were possible to cause these natural images to imprint themselves durably, and remain fixed upon the paper.¹

Talbot was a graduate of Cambridge University, a Fellow of the Royal Society, and a scientist of international reputation. He had long been aware of the darkening of silver nitrate when exposed to light,

but in fact, knew of no attempts to use this phenomenon to record a permanent image by the action of the sun's rays.

Motivated by his experience at Lake Como, in 1834 he began experimentation. Talbot's attempts to capture the fleeting images of time, by effecting and preserving a chemical change due to the action of light led to his beginning hypothesis:

I proposed to spread on a sheet of paper a sufficient quantity of the nitrate of silver, and then to set the paper in the sunshine, having first placed before it some object casting a well-defined shadow. The light, acting on the rest of the paper, would naturally blacken it, while the parts in the shadow would retain their whiteness. Thus I expected that a kind of image or picture would be produced, resembling to a certain degree the object from which it was derived. I expected, however, also, that it would be necessary to preserve such images in a portfolio, and to view them only by candle-light; because if by daylight, the same natural process which formed the images would destroy them, by blackening the rest of the paper.²

These were Talbot's first thoughts on the subject Herschel later called photography, and his success in making permanent images both by contact printing and with the camera obscura is a matter of history.

Talbot later began to realize he was not the only scientist involved in experimentation to produce photographic images. In his research he found a few such references, the most detailed of which was that of Thomas Wedgwood and Sir Humphry Davy, published in 1802 in the first volume of *The Journal of the Royal Institution*.

The experiments of these two men not only failed to produce images using the camera obscura, but they were unable to fix (make permanent) those which were obtained by direct contact. Wedgwood's process involved the contact printing of paintings, or prints made from engravings onto a surface sensitized with silver nitrate. The paper, or other material which was used, darkened on exposure to sunlight, producing a

copy of the desired subject which was located above. Davy recalled that,

*The copy of a painting, immediately after being taken, must be kept in an obscure place. It may indeed be examined in the shade, but in this case the exposure should be only for a few minutes. No attempts that have been made to prevent the uncolored parts from being acted upon by light, have as yet been successful.*³

This announcement by Davy, that the paper on which the images were formed would eventually turn entirely dark, led Talbot to comment, that had he known of these unsuccessful attempts, he may have considered the endeavor as hopeless.

*...when so distinguished an experimenter as Sir Humphrey Davy announced "that all experiments had proved unsuccessful," such a statement was calculated materially to discourage further inquiry.*⁴

Fortunately, prior to this knowledge, Talbot had successfully solved this problem and the images he produced were no longer susceptible to the further action of light.

To his process, Talbot gave the name Photogenic Drawing. An explanation of its inception and application was included in a paper read before the Royal Society, January 31, 1839, entitled: "Some Account of the Art of Photogenic Drawing, or the Process by Which Natural Objects May Delineate Themselves Without the Aid of the Artist's Pencil".

This publication was initiated by an announcement on January 6, 1839, in the newspaper Gazette de France, which revealed that "M. Daguerre had discovered a method to fix the images which are represented at the back of a camera obscura:..." Talbot having proved many times over, that he was greatly concerned with public acceptance and credit for scientific discovery was forced to reveal his research on the subject in order to claim priority of the invention. During the early months of 1839, the details of the Daguerreotype process were not yet revealed to the public, therefore Talbot took this opportunity to give free to the world his "Photo-

genic" process.

Following the paper which was read on January 31, 1839 to the Royal Society, announcing his discovery, a second letter was sent to the same organization on February 20, 1839 in which Talbot described, in detail, the process by which Photogenic Drawings were made. This information was published three days later in the Literary Gazette and widely reprinted and described throughout the world.

The photographic process at its inception seemed almost mystical. Even a scientist such as Talbot could only marvel at the making of a permanent silhouette image formed by the sun.

*The most transitory of things, a shadow, the proverbial emblem of all that is fleeting and momentary, may be fettered by the spells of our "natural magic," and may be fixed forever in the position which it seemed only destined for a single instant to occupy.*⁵

William Henry Fox Talbot, although receiving much renown in many fields of endeavor, excelled as a scientist, mathematician and botanist. He was not only one of photography's early pioneers, but was the first to attempt to use the medium as a research tool. In the first applications of his process, Talbot succeeded in copying botanical specimens by direct contact, producing images with elaborate detail in a short amount of time. "...for the object which would take the most skillful artist days or weeks of labour to trace or to copy, is effected by the boundless powers of natural chemistry in the space of a few seconds."⁶

His application of photography to the sciences extended to successful attempts to record images projected by the solar microscope.

*Contemplating the beautiful picture which the solar microscope produces, the thought struck me, whether it might not be possible to cause that image to impress itself upon the paper, and thus to let nature substitute her own inimitable pencil, for the imperfect, tedious, and almost hopeless attempt of copying a subject so intricate.*⁷

Talbot believed that time could be more usefully employed in other and more important endeavors, and with the development of a more "sensitive paper" he produced micrographs with as little as one-half second exposure.

Up to the point in Talbot's research when he successfully fixed the images of botanical specimens and those projected by the solar microscope, the idea of recording the image at the back of the camera obscura was but yet a dream. He had commented on the "beautiful effects which are produced by a camera obscura", and it often occurred to him the real possibility of preserving these moments in all their beauty and color on a piece of paper.

*And however much I might be disposed at first to treat this notion as a scientific dream, yet when I had succeeded in fixing the image of the solar microscope by means of a peculiarly sensitive paper, there appeared no longer any doubt that an analogous process would succeed in copying the objects of external nature, although indeed they are much less illuminated.*⁸

During the summer of 1835 this dream became reality. While at his home at Lacock Abbey, Talbot constructed a camera obscura out of a large box.

*This apparatus being armed with a sensitive paper, was taken out in a summer afternoon and placed about one hundred yards from a building favourably illuminated by the sun. An hour or two afterwards I opened the box, and I found depicted upon the paper a very distinct representation of the building, with the exception of those parts of it which lay in the shade.*⁹

In his first publication with respect to the Photogenic Drawing, Talbot also describes the making of silhouette portraits, copying of paintings on glass, delineations of sculpture, and the copying of engravings. Talbot not only emphasizes the importance of his invention to art and science, but makes the first inference to the vacation photographer. He explains

that "Travelers in distant lands" who are either not talented artists or have insufficient time to sketch all that they wish, may make use of the Photogenic Drawing process to produce many mementos of their journey.

The Process

In a letter to Samuel H. Christie, Secretary of the Royal Society, Talbot described the process employed in making Photogenic Drawings. The procedure is divided into two categories, (1) preparing the paper, and (2) fixing the resulting image.

Talbot recommended the selection of a fine quality piece of paper, one which has a smooth surface and is free from water marks.

*"I dip it into a weak solution of common salt, and wipe it dry, by which the salt is uniformly distributed throughout its substance. I then spread a solution of nitrate of silver on one surface only (six to eight parts water to one part silver nitrate), and dry it by fire."*¹⁰

Talbot suggests that, in order to obtain maximum sensitivity, there exists a proportion between the quantity of salt and silver nitrate in the solutions. This relationship must be determined by experimentation.

Repeated treatment of a piece of paper by the above process, alternately washing it with salt water and the silver nitrate solution, and drying the paper, will increase the sensitivity to the point where it can effectively be used in the camera to produce images in a more reasonable amount of time. The formation of this light sensitive halide, silver chloride, can be carried only so far, for after repeated treatments of a single piece of paper, the surface will begin to darken by itself, without exposure to light. Therefore, if additional sensitivity is desired, the photographer must approach this state without causing this darkening to occur.

The formation of silver in this print-out process is accomplished by the direct action of the sun's rays.

No development of a latent image is needed, thereby necessitating long exposure times.

After exposure to sunlight either by contact with another object or in the camera, the paper may be fixed by one or two methods. The simpler procedure consists of immersing the exposed paper in a solution of sodium chloride (common salt) and water, blotting off the excess moisture and drying the picture. The second method consists of immersing the paper in a solution of potassium iodide and water, the proportions of which must be determined by experimentation. If it is too strong, the solution will tend to bleach the silver image.

It should be noted that, due to Herschel's suggestion, hyposulphite of soda (hypo) later became a standard fixing agent to remove the unexposed and undeveloped silver halides. In a paper read on March 14 to the Royal Society, entitled, "Note on the Art of Photography, or the application of the Chemical Rays of Light to the purposes of Pictorial Representation," Herschel states that in order to make a photographic image permanent, one would need a "...liquid capable of dissolving and washing off the unchanged chloride, but of leaving the reduced, or oxide of silver, untouched. These conditions are best fulfilled by the liquid hyposulphites."¹¹ This salt was discovered by Herschel in 1819, and its use suggested to Talbot on February 1st by its discoverer. This chemical was also adopted and used by Daguerre in his Daguerretype process announced months later.

It is a curious fact that Talbot, in the first major publication of his Photogenic Drawing process, makes only a brief mention of the possibility of making a positive contact print from the original negative image, thereby correcting the image from left to right and reversing the tones for a more real representation. Producing a positive image by means of contact printing the original onto another piece of sensitized paper was mentioned by Talbot with respect to the copying of engravings, not the representation of landscapes or architecture.

By 1839 Talbot had made many positive paper prints, but it is suggested that prior to January 31, his

success was limited. His failure to describe the making of a positive image which represented continuous tones of shade leads the author to believe that Talbot had much difficulty in obtaining the quality he desired, and that the imperfections of his reversal procedure were not yet resolved at that early date. John Herschel too found difficulty with this aspect of photography, he commented:

*...and to operate a second transfer, or by a double inversion to produce the original effect, is a matter of infinitely greater difficulty; and in which the author has only recently ascertained the cause of former failures, and the remedy to be applied.*¹²

"To Mr. Talbot, therefore, we must concede the highest merit of being the discoverer of the photographic process, which will, probably, ultimately turn out the most convenient and most extensively useful."¹³

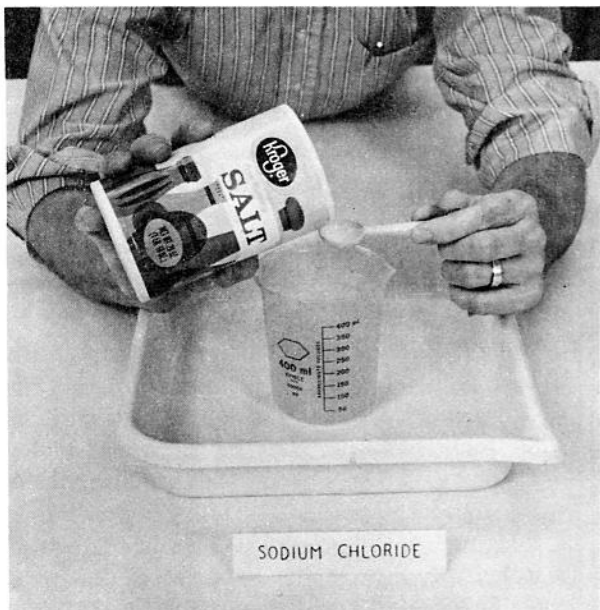
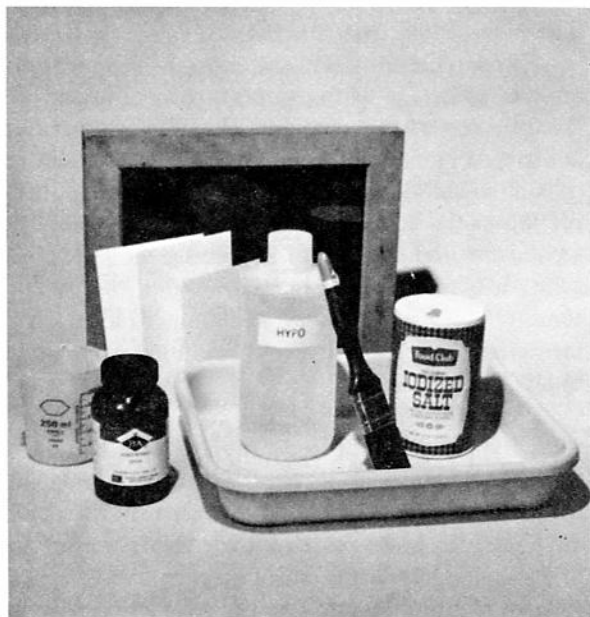
FOOTNOTE

- 1 William Henry Fox Talbot, *The Pencil of Nature* (London: Longman, Brown, Green, and Longmans. 1844).
- 2 William Henry Fox Talbot, "Some Account of the Art of Photogenic Drawing", *The London and Edinburgh Philosophical Magazine and Journal of Science*. (March 1839), p. 197.
- 3 *Ibid.*
- 4 *Ibid.*, p. 198.
- 5 *Ibid.*, p. 201.
- 6 *Ibid.*, p. 199.
- 7 *Ibid.*, p. 203.
- 8 *Ibid.*, p. 205.
- 9 *Ibid.*, pp. 205-6.
- 10 William Henry Fox Talbot, "Photogenic Drawings," A Letter to Samuel H. Christie, (February 20, 1839).
- 11 Sir John Herschel, "Note on the Art of Photography..." *The London and Edinburgh Philosophical Magazine* (May 1839), p. 366.
- 12 *Ibid.*, p. 366.
- 13 Robert Hunt, "On the Influence of Iodine..." *Philosophical Transactions* (1840), p. 325.

HOW TO MAKE A PHOTOGENIC DRAWING

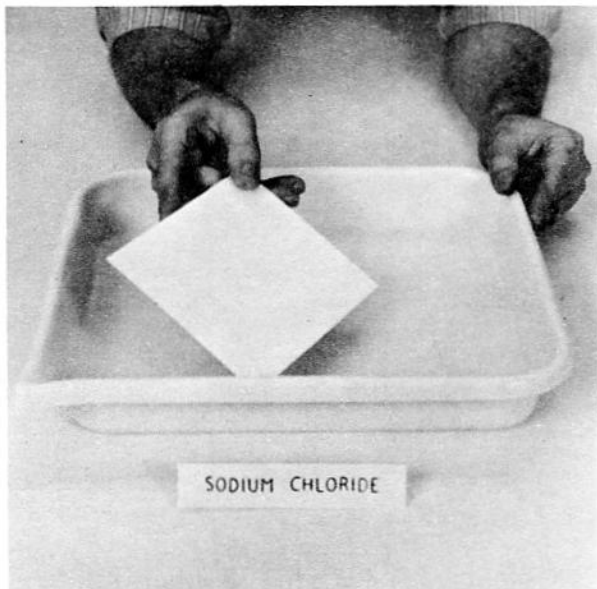
By W. A. Johnson and Donald P. Lokuta

The materials you will need to make photogenic drawings are: silver nitrate, salt, water, photo-fixer (hypo), water-color paper, a graduated beaker, a paint brush, a contact printing frame, a scale (one that will measure grain(s) and several trays. You'll also need an intense light source, the sun on a clear day, or if inside, a daylight balanced (blue) photo flood for the exposures.



First prepare a salt water solution by using tap water and common table salt (sodium chloride). Mix several ounces of solution with a concentration of 20 to 40 grains of salt per ounce of water, then pour into a tray.

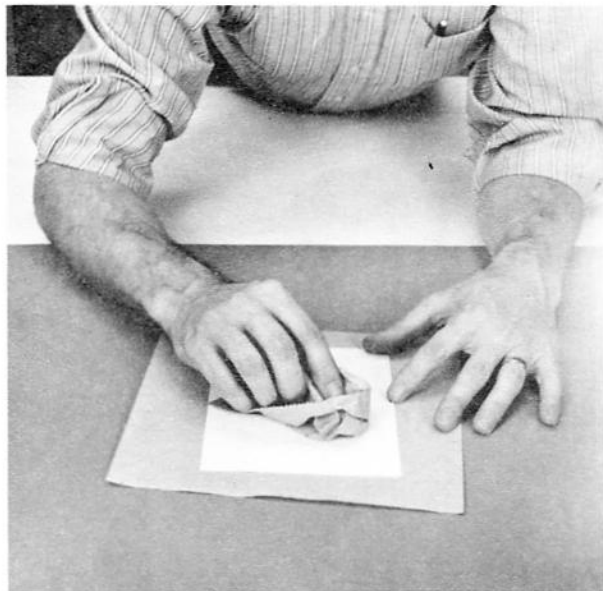
Then prepare the silver nitrate solution in the same proportions as the salt solution and let it stand in the beaker for later use.



Select a fine quality writing or water color paper (Strathmore). The paper must be free from water marks, and papers that are coated or of a glossy stock should be avoided.

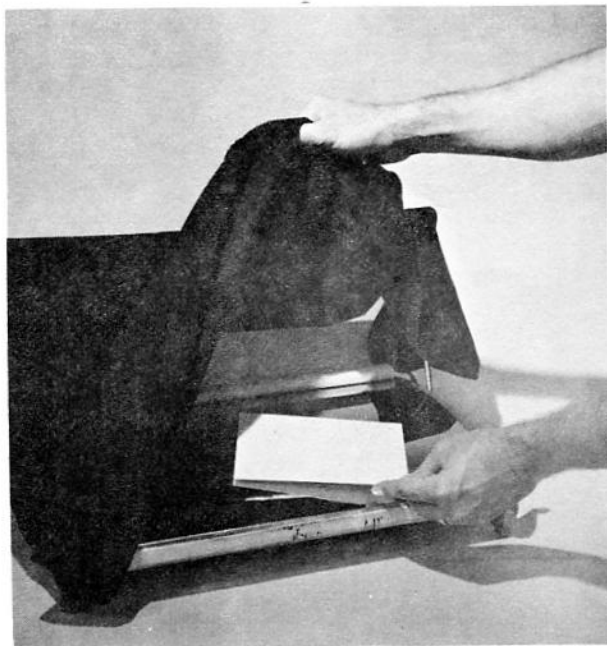
Immerse the paper in the salt water solution for about one minute and be sure that the surface is totally covered and free from air bubbles.

Remove the paper from the tray and place it on a paper towel. Carefully blot the top surface of the paper and remove the excess moisture. Blot in a vertical direction; take care not to remove the salt deposit with a rubbing motion. Remember, remove just the excess moisture to the point that the paper is still damp to the touch.



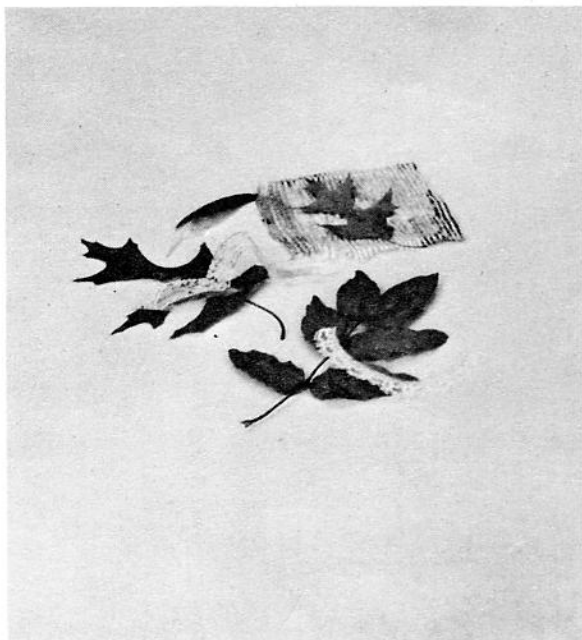
Under subdued light or photographic safe-light conditions brush on enough silver nitrate to cover the entire surface of the paper. Apply this solution as evenly as possible.

Care should be exercised while using the silver nitrate due to the fact that it will stain the skin and clothing. It is therefore advisable to wear rubber gloves.



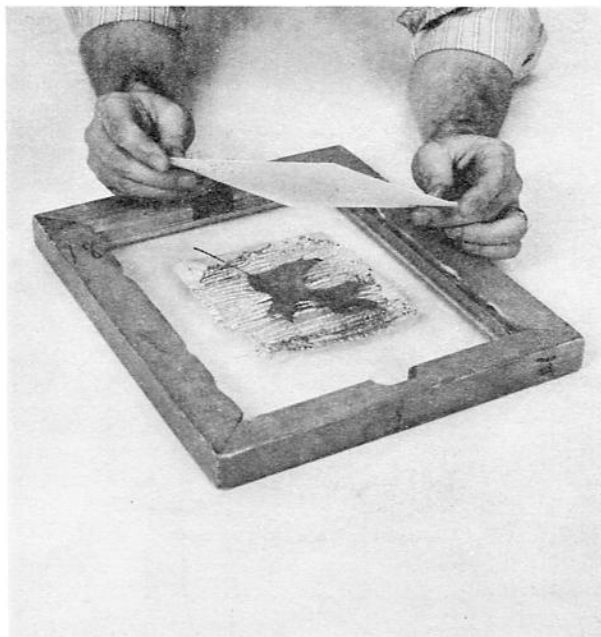
The sensitized paper must now be dried. It may be air dried, or to speed up the process, it may be placed on a print dryer. Do not put the linen cover in contact with the surface of the paper.

After drying, the sensitized paper may be stored in a light-tight box for future use, or exposed immediately.



Select the objects you wish to use to make contact prints (photograms) of. Try to obtain a variety of subjects : botanical specimens, fabrics, lace, photographic negatives or positives, or any other translucent or opaque objects may be used.

Place the objects to be used on the glass of a photographic contact printing frame, and then the sensitized paper on top with the light sensitive surface of the paper also facing the glass. Carefully place back into the frame and clamp into place.



The Photogenic Drawing paper is orthochromatic, therefore, it must be exposed to the sun or to a blue photo-flood (Daylight Balance) lamp.

After an exposure of a few seconds you will notice the paper darkening, continue the exposure until the image is somewhat darker than desired because the subsequent fixing will have a bleaching action.



The fixer should be mixed 1:2 with water and placed in a tray. The exposed Photogenic Drawing is then fixed for approximately five minutes, washed for 15 minutes, and dried.

The results should appear somewhat tan to brown in tone and have a singular quality about them. It is this unique quality of the photogenic drawing that makes the task worthwhile.



Subject: Mr. Cris Duckworth, Photog; W.A. Johnson

THE DAGUERRETYPE ON GLASS

Recent research at Ohio State University's Dept. of Photography and Cinema has produced a daguerreotype on a front surfaced mirror. With costs skyrocketing it became apparent that a less costly support material was needed to continue the classes in 19th century photographic processes. The front surface mirror has its faults, but at one tenth the cost of electro-plated materials it provides a reasonable solution to an expensive photographic process.

PHOTOGRAPHIE



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