

Michael Gross, "The 'Wet' and the 'Dry,'" January 1919

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The "Wet" and the "Dry"

(Fourth of the "Professor Pyro" Talks)

MICHAEL GROSS

ALTHOUGH, as I mentioned in my last talk, Daguerre gave his process to the French Government and then patented it in England," began Professor Pyro, at the fourth meeting of the "Evolution-of-Photography" class, "the daguerreotype proved more popular in America than in France or England. In fact, very few specimens of this process can be found in England now. In the same year that Daguerre made known his method, Morse established a pretentious photographic studio on Broadway, New York, to which he gave the grandiloquent title of 'The Palace of the Sun.' He immediately started to flood the local newspapers with advertising-matter. In these, he described, not the process itself, but the joy of being able to obtain likenesses of those one loved.

"When it is remembered that in those early days all portraits made by the Daguerreotype process were made by whitening the face of the sitter and placing him or her in the sun for a half hour or even longer, the 'angle' chosen by Morse for his advertising-copy may be readily understood. I might mention, in passing, that this lengthy exposure was soon cut down to twenty seconds by John Frederick Goddard, who discovered the accelerating-properties of bromine, which, with iodine, produced bromo-iodide of silver on the surface of the plate. Goddard's discovery, needless to say, did much to make the daguerreotype a commercial success.

"As an interesting sidelight of those early days, I have copied two 'Palace of the Sun' advertisements from the New York papers of Morse's time.

"'TO THOSE WHO LOVE'—reads the headline of the first one, taken from the New York *Sun*, surely a universal appeal, if there ever was one. 'How cold must be the heart that does not love.' the announcement continues reflectively. 'How fickle the heart that wishes not to keep the memory of the loved ones for after-times. Such cold and fickle hearts we do not address. But all others are advised to procure miniatures at Professor Morse's Daguerreotype Establishment.' Here is another, from the New York *Tribune*, which begins with the solemn headline: 'IN AFTER-YEARS' followed by the text: 'In after-years to retain in our possession the likeness of some one who has been loved by us is a delicious, even if sometimes a melancholy pleasure. Such a pleasure can any one enjoy who patronizes Professor Morse, the celebrated Daguerreotype Artist in his Palace of the Sun on Broadway.' Note the skill with which all details of the process itself are left out of these 'early-day' advertisements, and how 'sob-stuff' that would do credit to Laura

Jean Libby is substituted in its stead. To paraphrase a famous advertising-slogan: 'There was a reason.'

"The daguerreotype held sway for about ten years, from 1839 to 1851, although early in 1849 the skids on which the art and practice of daguerreotypy were to slide to oblivion were already being prepared by Gustave Le Gray, who, in that year, began to make photographic experiments with a substance called collodion, which consisted of a solution of guncotton in ether and alcohol. This preparation was introduced into England in 1847 and Le Gray tried to use it as a means to improve the discovery of Niepce St. Victor, Nièpce's nephew, who had placed the albumen-process—in which the iodide of silver was retained on the plate by means of the white of an egg—on the market.

"Le Gray tried to substitute collodion for the albumen used by St. Victor, but was not successful in the attempt. Frederick Scott Archer, an Englishman who was working along the same lines, finally mastered the working-details of the process and, in March 1851, wrote an article for a magazine called *The Chemist* in which he described the first workable method of what is to this day known as the 'wet-collodion' process. Archer made the first collodion-negative in 1848, and so popular did this process become that it displaced entirely the callotype and the daguerreotype, being used almost exclusively between 1855 and 1881. In fact, before Archer's time, photography was regarded as a curiosity, but the perfecting of the collodion-process made the art of picture-making, for the first time, popular.

"Even to this day, wet-collodion plates are considered excellent for and largely used in the making of lantern-slides and similar work. The only disadvantage in using the process was the fact that the plates had to be used while wet. A photographer who went out to make a few landscapes in the days of Archer had to carry along with him a darkroom on wheels in which his plates could be prepared. And yet I have heard some of you complain because you were sent out to do some architectural work and had to carry an 11x14 camera and a few dozen plateholders. The next time you get an assignment of this kind, think of what the photographer who wanted to do similar work in Archer's time would have to carry along and be glad that things aren't worse. To remedy the disadvantage of the wet-emulsion, desperate efforts were made by many would-be inventors to find something with which to cover and to dry the sensitive surface of a collodion-plate. Had our esteemed guardian of food-stuffs, Mr. Hoover, lived in those days, he would have found it a difficult task to carry out his plans for the conservation of food, for among the many substances experimented on and recommended as dryers for collodion-plates were brown sugar, white sugar, malt, raspberry-vinegar, molasses, tea, beer, coffee, and even tobacco. Despite his discovery of the collodion-process, his introduction of pyrogallic acid as a developer, and the invention of numerous other photographic innovations—including a camera in which plates could be exposed, developed and fixed—Archer died a very poor man, leaving his family destitute. A fund was immediately started to keep these poor unfortunates from starving to death and I have clipped a little notice from the June 13, 1857 issue of *Punch*, to give you an idea of how the appeal was made.

"'TO THE SONS OF THE SUN'—the announcement is headed, and the text reads: 'The inventor of collodion is dead, leaving his invention unpatented to enrich thousands, and his family unportioned to the battle of life. Now, one expects a photographer to be almost as sensitive as the collodion to which Mr. Scott Archer helped him. A deposit of silver is now wanted (gold will do) and certain faces now in the dark chamber will light

up wonderfully, with an effect never before equalled in photography. Now, answers must not be in the negative.'

"The expense of metallic tablets, and the labor and inconvenience of preparing collodion-plates, induced many experimenters to work in the direction of a dry photographic emulsion. The aim was accomplished when, on July 18, 1873, J. Burgess, of Peckham, advertised that he had for sale a ready-made solution with which photographers could coat glass and so make their own dryplates. However, the name of the actual inventor of dryplates is about as clear as the income-tax law—and as much argued about. Burgess, Maddox, Kennett Wratten, and many others were all aiming for the same goal, and it is hard to determine who reached it first. Suffice it to say, that the introduction of dryplates marked a new epoch in photography and when, in 1878, Wratten and Wainwright advertised ready-made dryplates for sale, the product sprang into instant popularity and remains in universal use to this day.

"To go back to the source of the next step in photography, it is now necessary that we retrace our steps to the time of Archer again, and see what other men were doing in other lines. In 1859 Alexander Parkes, of Birmingham, patented the preparation of a substance made from nitro-cellulose and camphor. Hyatt, of Newark, afterwards commercialized Parkes' process, the product of which was called celluloid, and to this very day Newark remains the center of the celluloid-industry.

"However, it was not until almost forty years later, in 1884, to be exact, that celluloid was thought of in connection with photography. In that year John Carbutt, of Philadelphia, experimented with this material as a base. It must not be inferred, however, that attempts had not been made before Carbutt's time to make a filmroll. As far back as 1854, J. B. Spencer and H. J. Melhuish had already taken out a patent on a long sheet of sensitized paper upon which pictures could be obtained in succession, the unexposed parts of the strip being rolled up inside the camera. In 1868, Dawson, of London, published a method of producing a transparent, flexible supporting-film which could be used as a ground for a photographic emulsion. Both these 'roll-film' departures as well as many others that appeared from time to time, must have 'gone wrong' in the manufacture, for they never became popular. From 1884, the year in which John Carbutt started to work with celluloid, many more or less successful celluloid-films were placed on sale. Finally Eastman, in 1885, invented what was known as 'stripping-film.' This was merely paper prepared with a sensitized gelatine-film, which allowed the finished negative to be stripped from the paper-support and then transferred to a gelatine or celluloid base before printing.

"In 1887 Goodwin, a New York clergyman, perfected a celluloid-film and applied for a patent on his discovery. However, it was not granted until 1898. and while it was in the United States Patent Office, the Eastman Kodak Company applied for a similar patent. Cody, of the Blair Camera Company, had already patented, in 1894, the use of the daylight-loading cartridge, and, in 1903, the first celluloid photographic film, with a layer of gelatine on the back to prevent curling, was placed upon the market by Eastman.

"This brings us a considerable distance along the road." Professor Pyro concluded, "and I have no doubt that the remainder of the path will now be a more familiar one to you all."

[End of text.]

EDITOR'S NOTES:

Morse's "Palace of the Sun" is also mentioned in D. T. Davis, "The Daguerreotype in America," *McClure's Magazine* (New York) 8:1 (November 1896): 3–16; "Centenary of Dr. John William Draper, First Portrait Photographer," *Wilson's Photographic Magazine* (Boston) 48:654 (June 1911): 247–50.¹

1. http://www.daguerreotypearchive.org/texts/P9110001_DRAPER_WILSONS_1911-06.pdf

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