

Joseph Berres, "Photogenic Etching," 5 September 1840

(keywords: Joseph Berres, Alfred Donné, history of the daguerreotype, history of photography.)

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PHOTOGENIC ETCHING.

PROFESSOR BERRES, of Vienna (whose experiments in this art we lately recorded), in a very recent letter, says:—

“Ever since the discovery of the representation of objects on iodined silvered plates, I felt a constant desire to render durable these representations, so delicately portrayed by nature, and to endeavour to discover some method by which they might be rendered available for printing from, and by this means be multiplied to any extent. I at last struck out a plan which brought me very near the desired end. I began my experiments without any previous knowledge of the art of etching, and without any experience whatever in the use of the acids necessary for the fixing of the daguerreotype, which rendered my undertaking certainly much more difficult, but at the same time more original.

“During my experiments I learned, by a paper communicated to the ‘St. Petersburg Gazette’ by M. Hammel, that M. Donné, in Paris, was also occupied with the same object, viz. that of endeavouring to etch the heliographic pictures; and that he had laid the proof sheets of a plate, from which he had taken twenty impressions, before the Institute at Paris and the Imperial Academy at St. Petersburg. From the same journal I also learned that M. Daguerre had loudly expressed his displeasure upon the subject; and that he had declared, at a meeting of the Institute, the utter impossibility of ever attaining any perfection in etching, and, consequently, in multiplying, his pictures.

“Although this opinion, from a man of so much experience in heliography, was not encouraging, nevertheless it did not depress me, but excited my zeal and determination to use my utmost energy in endeavouring to obtain a perfect etching.

“Very shortly after this, on the 5th April last, I completed my first picture, which was the representation of a section of a plant, which I had obtained by means of the hydro-oxygen-gas microscope. On the 11th April I succeeded in representing a female figure, taken by the same means from an engraving. And the following day I etched another upon plated copper, representing the engraving of ‘The Smuggler,’ and where I had the pleasure of seeing the features of a man particularly sharply etched. The experience I had already acquired now taught me that the plated copper-plates, such as are used for the daguerreotype, were not fitted for producing perfect etchings, and, on account of the different properties of the silver and copper, would completely spoil the pictures. On this account I began to use silver plates (chemically pure). The success of my method was now much more complete; and I succeeded in producing a number of good, but still weak engravings. In the meantime the success of my undertaking was so certain, that I laid it

before the scientific public, through the medium of the 'Vienna Gazette,' on the 18th April last.

"On the 30th April I at last succeeded in producing a good heliographic etching of Stöber's engraving of the 'Girl with the Butterfly.' And upon the same day, at the meeting of the Imperial Society of Physicians in Vienna, I communicated my method without the slightest reserve; and, according to my desire, it was published in almost all the leading * literary publications in Europe.

"It was only at the latter end of May we were informed that M. Donné had sent a *sealed packet* to the Institute in Paris, containing his secret of etching from the daguerréotypic plates, but accompanied by the condition that the packet should not be opened until the French government had informed him what remuneration he was to receive for his discovery; so that the public is still in ignorance as to the degree of perfection which M. Donne has reached in his invention.

"Since the publication of my discovery, I have prepared many pictures, and always with increasing success. Amongst them are different views of the city of Vienna.

"The last deeply etched specimen, which represents the Cathedral of St. Stephen's, and several hundreds of which have been struck off, I venture to lay before the public,*[2] as the point of perfection to which I have at present carried the process.

"The advantages of the path which I have now opened to the art of engraving are incalculable:—

" 1. Every outward object can by a clear light be correctly represented and etched. Thus all views of towns, landscapes, military encampments, &c. can be taken, etched, and printed without delay.

" 2. By the assistance of the hydro-oxygen microscope, every object too minute for the human eye can be magnified, etched, and multiplied to any extent desirable.

" 3. Engravings can be represented and multiplied in the same size and form, or either increased or diminished to any form which may be most convenient.

" 4. The same also holds good with respect to maps and charts of every description, handwriting, and printing; also old copperplates and typographical works can be copied and multiplied without injuring the original in the slightest degree.

" 5. Also oil-paintings, portraits of living persons, and representations of the manifold objects appertaining to natural history, can be taken, etched, and printed from to any extent, and their utility thus increased. There can be no question but that through my discovery alone has daguerréotypy obtained the stamp of utility. Nevertheless, this new plant, which promises to produce such valuable fruit, has scarcely passed the tender age of childhood, and still requires the most nurturing protection. In order to bring it to perfection quickly, according to my ideas, the following points are requisite:—

" 1. A government, or some scientific individual possessing knowledge, enterprise, and pecuniary means, should undertake the carrying forward of this method of etching engravings.

" 2. The preparation of the silver plates must be watched with the greatest care and knowledge of the business, only to be gained by experience. It is indispensable that the plates should be of the most pure chemical silver, firm and close, so that there shall be no impediment to the etching power, and that the surface of the plate shall be brought to the highest possible degree of polish of which silver may be capable.

" 3. The improvement of the camera, in relation to power of extension on all sides, and great brightness, that moving objects may be quickly caught and fixed with the necessary degree of accuracy.

“ 4. The heliographs must be sharp, and cleansed as much as possible from iodine.

“ 5. An improved and remarkably fine printing ink.

“ 6. A peculiar description of printing-press. As the whole process of my discovery is purely chemical, and when the pictures are examined through a microscope they will return the objects, it is necessary that a new, soft, but powerful printing-press, should be invented, which shall act on all sides with equal power, and impart to the paper sufficient of the printing, ink, which must be laid on with the greatest care.

“As none of these points present much difficulty, and as we live in an enterprising and richly gifted age, I look forward to see my hopes and wishes realised.

“I, as a practising physician, as professor in the university, and author, can only in future give short glances to my offspring ; and must also, for pecuniary reasons, recommend and leave it to the care of those who have the enterprise, capital, and time to attend to it.

“My printed heliographic pictures have a singular character. The resemblance to the daguerreotype is extreme; and, like them, they have no inward shadow, although much gradation of shade. The principal difference between these pictures and those engraved by the hand of man is the great correctness in the drawing, and the proportion and relative size of the objects, and that most important of requisites, perspective. They are drawn by a process of nature which knows no trouble, and finds no task too intricate or too extensive for her capabilities— that can enter into the most minute details, and can reflect them truly, and according to fixed laws.

“The most accurate engravings, performed by the most skilful engraver, appear poor when minutely examined, and at last leave us dissatisfied ; while those produced by this new science continually afford new objects of admiration to our most severe tests with the magnifying glass, through which its usefulness and beauty increases by our examination.

“
Dr. JOSEPH BERRES,
Professor of Anatomy in the University
of Vienna.”

“Vienna, 3d August, 1840.”

* See No. of *Literary Gazette* of 23d May past.

*[2] Copies of nearly all the engravings hitherto made are in the possession of my friend, Dr. R. H. Mackenzie, of London, who will be kind enough to shew and explain the process of engraving to any scientific individuals interested in the art.

[End of text.]

EDITOR'S NOTES:

Berres was one of a handful of individuals experimenting with methods of modifying a daguerreotype for use as a printing plate. As mentioned in the article, Alfred Donné was another. Armand Hippolyte Louis Fizeau was also successful in the effort.

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