

Fizeau, regarding the use of gold chloride, 22 August 1840

(keywords: Armand Hippolyte Louis Fizeau, gold chloride, chlorure of gold, history of the daguerreotype, history of photography.)

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Literary Gazette; and Journal of the Belles Lettres, Arts, Sciences, &c. (London) No. 1231 (22 August 1840): 545. This text appears as part of a column under the header: "PARIS LETTER. Academy of Sciences, August 18, 1840."

M. Fizeau communicated a method of fixing photographic impressions obtained with the daguerreotype, by means of a chlorure of gold. The mixture employed was one gramme of chlorure of gold dissolved in half a litre of pure water (distilled), to be mixed with three grammes of hyposulphite of soda, also dissolved in half a litre of water. The two mixtures to be poured gradually together, and well stirred. The plate with the impression is to have some drops of alcohol poured on its iodised surface, so as to wet it completely, and it is then dipped successively in pure water and the solution of the hyposulphite. The plate is then fixed over a lamp, with the impression upwards, so as to be well heated, and a quantity of the solution of this salt of gold is poured on it, so as completely to cover it. In three or four minutes the impression begins to get much more strong and clear: the liquid should then be poured off, and the plate washed and dried. By this operation some of the silver covering of the plate is dissolved, and gold is precipitated on the silver and on the mercury, but with different results. The silver, which, by its shining, produces the dark parts of the impression, becomes slightly browned by the thin coat of gold that covers it, and hence the shades become strengthened. The mercury, which, in its state of infinitely small white globules, forms the lights of the impression, acquires more solidity and brightness by its amalgamation with the gold, so that the effect of the impression is in both these ways increased. The impression also becomes fixed.

[End of selected text. All content related to photography herein provided.]

EDITOR'S NOTES:

Two substantive improvements were made to Daguerre's original process: the use of bromine to increase plate sensitivity, and the use of gold chloride to strengthen and tone the image.

Armand Hippolyte Louis Fizeau also devised a method of using the daguerreotype to produce multiple intaglio prints. Additional information regarding Fizeau's activities with the daguerreotype can be found in David Travis, "Photography as a Print-Making Medium: The Early Successes," *Bulletin of the Art Institute of Chicago* 69:3 (May–June 1975): 15–19; Theresa Levitt, "Biot's Paper and Arago's Plates: Photographic Practice and the Transparency of Representation," *Isis: an International Review devoted to the History of Science and its Cultural Influences* 94:3 (September 2003): 456–76.

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