

**“M. Daguerre’s Process of Engraving,” reported 19 October 1839**

(keywords: Louis Jacques Mandé Daguerre, J. T. Cooper, St. Croix, history of the daguerreotype, history of photography.)

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**THE DAGUERRETYPE: AN ARCHIVE OF SOURCE TEXTS, GRAPHICS, AND EPHEMERA**

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### M. DAGUERRE'S PROCESS OF ENGRAVING

THE process of M. Daguerre is no longer a secret;—conjecture is set at rest by the whole matter having been divulged. From the time we first heard of the effects of photography, and of the Daguerrotype, which were thought to be one and the same thing, though they are decidedly dissimilar, we have lost no opportunity to acquaint ourselves with whatever might transpire respecting these extraordinary engravings,—engravings, not executed under the management of artists, but of chemical experimentalists. The over-eagerness of many of our contemporaries to lay something new about it before their readers, has led to many hearsay errors having been published; and we, therefore, are not sorry that we determined to wait until a better light had been thrown upon the subject. That time has come, and we now fulfil our deferred intention.

To procure an engraving by M. Daguerre's process, a thin plate of copper, one side of which has been plated with silver, must be carefully washed with a solution of nitric acid to cleanse its surface, and to remove any particles of copper which may intervene between the thin coating of silver. The plate must next be exposed, in a well-closed box, to the vapour of iodine, a small quantity of which is placed at the bottom of the box, but separated from the plate by a thin gauze, to cause the vapour to spread, or diffuse itself equally. The room must be darkened meanwhile, and the plate must be surrounded with a small metallic frame, to prevent the vapour of iodine from condensing in larger quantities round the margin than in the centre. In about twenty minutes, when the plate has acquired a yellow colour, it must be withdrawn from the vapour. The plate must now be placed inside the camera obscura, at a focus previously ascertained, and carefully preserved from the faintest action of light; for, if exposed to it for only the tenth of a second, it would become affected by it. As soon as the camera, containing the plate, is steadily placed on a proper station for receiving the picture required, the light is admitted through the focal lens, and the plate soon receives an impression of the objects comprising the scene. When the plate is removed from the camera the impression is hardly perceptible, but it becomes distinct enough when it has been submitted to the vapour of mercury, at a temperature of sixty degrees Reaumur, contained in a small vessel at the bottom of a box used for this purpose alone. The plate must next be plunged into a solution of hydro-sulphite of soda, which acts most strongly on the parts which have not been changed by the rays of light. Lastly, to prevent the impression from undergoing any further change when exposed to the light, it must be washed in distilled water. The impression obtained is so superficial,

and so little solid, that a very slight friction destroys it; hence, It inadvisable to frame the plate under glass.

Plates of copper plated with silver receive better impressions than do plates of pure silver.

The impressions are most faithful, and exquisitely delicate. M. Daguerre lately exhibited, at the Chamber of Deputies, some views of streets in Paris, and of a group of busts in the collection of the Louvre; and the minuteness of detail displayed in these views, especially in those of the streets, excited the wonder of every beholder. In one, representing the Pont Marie, all the minutest indentations and divisions of the ground, or the buildings ; the goods lying on the wharf; even the small stones under the water at the edge of the stream, and the different degrees of transparency given to the water, were all shown with the most incredible accuracy. The use of a magnifying glass revealed an infinity of other details quite undistinguishable by the naked eye, and more particularly in the foliage of trees.

At the present moment this process of engraving is being exhibited and explained by Mr. Cooper, at the *Polytechnic Institution*, in Regent Street, and by M. de St. Croix, at the *Adelaide Gallery*, West Strand, at two o'clock: the charge for admission to the former being *two* shillings, (though, according to the advertisements, it is only one,) and to the latter one shilling. We paid a visit to the former at the appointed time, and were, in common with many others, greatly disappointed in our expectation of seeing the several processes, and their progressive changes, upon the plate. The plates were so soon hid from sight after being withdrawn from the boxes, and, when exhibited for a minute or two, were only shown to those who chanced to be opposite to the lecturer, that, although we sat on the foremost form, we saw hardly any thing more than the boxes. A little locomotion on the part of the lecturer would easily have obviated all this. The oral account of the proceedings comprised so many processes, and so many minutiae, that no one, without actually seeing the particular results, could remember what he had heard, unless gifted with a most excellent memory. How much better it would be, at both institutions, to furnish the audience with a little bill of the play, explaining the different acts and scenes, and by reference to such a bill any interlude of dumb-show would be rendered intelligible. However, after the several processes had been performed, a plate was at last ready, and was then placed in the camera obscura, which was removed from the room and placed on a platform outside the window. The focal glass was directed towards the church in Langham Place, and some of the neighbouring houses. In about half an hour the camera obscura was brought back into the room, and the plate, on being taken out, was found to have a faint picture of the scene upon it, and which became more distinct after it had been submitted to the final processes above described. The appearance of the plate was now most beautiful, exhibiting the most perfectly clear and accurate view of every object that had been reflected upon it. Another plate, representing a studio or gallery, containing various busts, was equally admirable. By substituting the powerful light of the oxy-hydrogen microscope, Mr. Cooper succeeded in representing an insect, the water-scorpion, upon another prepared plate. The fidelity and beauty of the engravings were surprising.

[End of text.]

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EDITOR'S NOTES:

Additional information regarding J. T. Cooper and St. Croix can be found on R. Derek Wood's informative web site, *Midley Essays on the History of Early Photography*.<sup>1</sup>

1. <http://www.webarchive.org.uk/wayback/archive/20100311230213/http://www.midley.co.uk/>

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