Porta hadseverul dark chambers constructed of a cylindrical form of a particular length, with a lens at one end and a white card or paper at the other, so placed as to be within the focus of the glass upon which the external images were depicted. This plan he intended for such persons as knew not how to draw; so that we have here the almost perfect design of the instrument of Daguerre.

He conceived that to obtain perfect representations of the most complicated sets of objects, it was only necessary to follow the focal light with the trace of a crayon. In this idea, however, he was not precisely correct; for painters and designers, especially those who were engaged on large works, such as panoramas and dioramas, and who used the dark chamber, found that it was only useful for defining objects in the mass, to give them the respective sizes and positions according to the rules of linear perspective; but to the effects of what is called *aerial perspective* they found the dark chamber completely incompetent. Nor could their utmost efforts avail them to any extent, or render what they did accomplish of permanent use. This object, however, has at length been attained, and he who, perfectly ignorant of the art of drawing, is destined to wander to the remotest corners of the earth, may now, without the aid of an artist, carry with him the true and faithful delineation of the home of his youth, and of the objects most dear in his earliest recollections, with a truth and fidelity that no manual operation could imitate.

Alchemists, in those fruitless attempts after the *elixir vitæ*, and the transmuting stone, which formed the foundation of the present invaluable science of chemistry, succeeded in uniting silver with a marine salt, and produced a combination called *lune* or *argent corne*. In the work of Fabricius, "De rebus Metallicis," published in 1566, a substance of this kind is especially noticed. It had the colour and transparency of horn, and the fusibility and softness of wax, but, if exposed to the light, changed nearly to violet, and by the continued action of the same influence became nearly black. This was the natural *argent corne*, or *lunar* caustic.

The salt produced by the alchemists possessed the remarkable property of turning black, and the blackness was vivid just in proportion as the rays which occasioned it were powerful. Cover a sheet of paper with a coating of *argent corne*, or, as it is now called, *chloride of silver*; obtain by the aid of the lens the form of some object upon this coating, and the parts occupied by the figure will change to a dark colour, while the remainder of the paper, or rather its coating, will continue white. The parts which have a strong cast of light upon them will become quite black, the half-tints and shades being formed by grey through a less forcible luminence.

Place an engraving upon the paper covered with chloride of silver, and expose it altogether to the sun's rays, the engraving being uppermost, and that part of the paper covered by the engraving will remain white, in consequence of the interception of the rays, which cannot, on that account, reach the coating of chloride; while all the rest will be tinged with black. Where the paper on which the engraving is printed has retained its semi-transparency, the saline coat will be obscured accordingly; the result being that the coating on which the operation creates its effect will have its forms and shades in an inverse manner; the darkest parts of the engraving being whitest on the chloride, and the lightest parts of the print the darkest on the paper.

Mr. Hunt snows us, that notwithstanding the complete knowledge which the alchemists unquestionably possessed as to the effects of light upon chloride, they were too abstract in their notions to turn it to any practical account.

M. Charles, he tells us, a Frenchman, succeeded in obtaining *silhouettes*, or black profile portraits, but he never made known the nature or steps of his process, and his secret died with him. The first authentic intimation of this new art was contained in a memoir of Mr Wedgwood, the celebrated improver of the manufacture of porcelain in this country, whose paper appeared in the June number of the "Journal of the Royal Institution" in 1820. The author was desirous of obtaining by the assistance of paper, prepared with chloride or nitrate of silver, the representations of church windows, as well as

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