

After having multiplied and varied his experiments in such a manner as to present positive results, M. Lepere, in conjunction with the committee of engineers appointed to examine his experiments, draws the following conclusions:

1st. That the schist of Cherbourg, when strongly calcined and pulverised, forms an excellent mortar when mixed with sour lime.

2dly. That in order to give precisely the same properties to schist which are possessed by puzzolana and terrass, the former must be calcined in a reverberating, instead of a lime, furnace.



No. 50.

*Description of a very simple and useful Scale, for dividing the vanishing Lines in Perspective. In a Letter from G. CUMBERLAND, Esquire, to Mr. NICHOLSON.\**

(With an engraving.)

SIR—Having been in the habit of drawing for my amusement all my life, and feeling the value of that acquirement, it has been my practice to recommend to others as much of that acquisition as can with very little trouble be attained; I mean the putting into perspective common objects; such as simple landscapes, machines, buildings, and the interior of apartments, manufactories, &c. And where I have had an opportunity to give four or five close lessons, I have generally seen my end obtained to their great satisfaction, without ever showing them the *Jesuits*, or any other voluminous treatise; books that have hindered more the study of art, than they have ever made artists; for a moment's consideration on this

\* Nicholson, vol. 16, p. 1.

subject will convince any mind, capable of reflection, that, to accomplish the general ends that even most painters have in view with respect to that art, it is only necessary to know the use of *the points of sight and horizontal line*. For while men have agreed to avoid bevel lines in all their constructions that are intended for use or habitation, we shall only want as much knowledge of the art as will enable us to put these into perspective, and to assist us at first, before, by practice, we have attained a correct eye; for practice, daily practice, will soon do all the rest, even by barely drawing the interior of a large apartment or gallery, with the objects continually before us in common use.

To save time, however, and to imprint the few lessons necessary to be given on the mind of a learner, I have, some time back, made use of the following simple contrivance, which I now send to you, as the most likely means of universally promoting this necessary preliminary study, where the first general principles have been instilled:—Take a sheet of paper of an octavo size, and rule it with very black ink, from A to B (fig. 1, plate 7). This represents the horizontal line; then fix a point in the centre, at C; this we will call the moveable point of sight: afterwards cross it, as in the plate, with as many diagonal lines as you please; and thus you have an instrument prepared that will be a sure guide to an inexperienced eye, in taking the perspective lines of all objects placed at right angles; such as streets, buildings, churches, apartments, &c. by merely placing it under the leaf you mean to draw them on from nature, so as to see them faintly through, as boys do their writing-copies, when young and inexperienced.

But, to make this instrument more complete, we should add a plate of glass of the same size as the leaf of the drawing-book, on which the like dark lines should be

drawn so as, by holding it up perpendicularly, we may see, and, as it were, render tangible, the truth of perspective lines of buildings; and for those whose sight is bad, or for very young people, it would not be amiss to take a copper-plate of the like dimensions, and with a fine needle gently scratch out the like lines, in which case there will be no necessity to take off the burrs, as the engravers, call the ridges raised in ploughing copper; and from this plate, *ten thousand* impressions may be taken of the faint lines by way of guide, on the drawing-book of a young beginner, without injuring the plate; for I can assure your readers, that it is more difficult to erase a slight scratch from a sharp needle on copper, by the act of taking impressions, than the deepest cut of the graver; the reason of which is, that the ridges of the skin of the printer's hand can never enter that fine line, whereas, in a coarse one, he polishes the edges of it down by every operation, and thus renders it a smooth channel, at last undefined, and incapable of retaining the printing ink; and the reason I am so diffuse on the subject is, that I think the knowledge of it may be generally useful, particularly to those who wish to extend the publication of botanical outlines: as it is not necessary to be taught the art of engraving for those who can draw lines, to design on copper the peculiarities of plants, or their anatomy. How to trace deeper lines with certainty on copper as easily as on paper, I will have the pleasure to communicate to you at my next leisure moment.

But, to return to our subject.

To this simple contrivance, we may add a sheet of perpendicular lines, by which means the uprights will all be shown; and for very heavy intellects, at first even the horizontal scale might be useful, though I never found it so among my acquaintance. There are also many little helps of simple contrivances to further the first acquire-

ment of this plain branch of the art; that, if you approve the idea, I shall with pleasure transfer from my portfolio: but with respect to the application of this already described, it will be necessary to premise, that the scale should be longer than the drawing-book each way; by which means, by barely sliding it to the right or left, you can at pleasure place your point of sight more or less to the right, or left, or middle of the horizon; and, to be prepared for all circumstances, it would be as well to be provided also with a scale having a high horizon, and another with a very low one, such as the Dutch painters generally used, and which ever produces a picturesque effect, by giving many profiles of the elevations, and multiplying the lines of light.

Thus you have an easy expedient for a first help—practice will accomplish the rest; for we all know, or should know, that daily practice discloses to the industrious draftsman all the arcana of optical, aerial, and linear perspective, destitute, it is true, of terms to describe his acquirement; but to his own mind a perfectly intelligible and useful rule, by the help of which he can, with certainty, imitate all he sees on the theatre of the universe. I am, &c.

GEORGE CUMBERLAND.

*Bristol, December 4, 1806.*



NO. 51.

*Description of a Cheap, Simple, and Portable Instrument, for determining the Positions of Objects in taking a Picture from the Life. By R. L. EDGEWORTH, Esquire.\**

(With an engraving.)

THAT active and intelligent philosopher and journalist, citizen Pictet, author of the *Bibliothèque Brit-*

\* Nicholson, vol. 1, p. 281.

Cumberland, George. "Description of a Very Simple and Useful Scale, for Dividing the Vanishing Lines in Perspective. In a Letter from G. Cumberland, Esquire, to Mr. Nicholson." *The Emporium of Arts and Sciences* 2.10 (1813): 255+. Nineteenth Century Collections Online. Web. 14 July 2015.

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