

paper-hangings, and for mechanically dyeing thin gauzy dresses, may well be regretted. Much nonsense has been written about this green being prone to volatilise, and much good sense about its liability to become detached, to drop or be brushed off, and so to float about in the atmosphere. For toys, at least, this pigment should never be used, and people would do considerable service by refusing to buy them if suspiciously bright in colour. It is one of the pleasures of childhood, a pleasure no child can resist, of sucking or biting anything and everything which comes in its way. If, therefore, the attractively green handle of a roller or what not becomes suddenly shabby, it may be taken for granted that a certain amount of arsenic has been rapturously swallowed by its little owner. For ourselves, if we must have poison on our heads, our clothes, and our walls, means should be taken of securely fixing it by a proper proportion of albumen or other suitable substance. In the case of paper, perhaps a glaze of gamboge might be found advantageous, that pigment being, as has been before remarked, "especially serviceable as a glaze over other colours in water, where its resin acts as a varnish which protects them." For the rest, until a new colour equally vivid and equally cheap is discovered, this preparation of arsenic will continue in use. The only way is to limit that use as much as possible, and to find out the best and safest mode of employing it.

There are also several other copper products, such as verdigris, mountain green, &c., but as pigments they are all too fugitive to be safely employed.

*Organic Greens.*

*Prussian Green* may rather be classed as organic than inorganic, inasmuch as it is now generally a mixture of gamboge with Prussian blue, itself containing cyanogen. It is neither permanent nor very unstable.

*Sap Green*, prepared from the juice of the berries of the buckthorn, &c., has but little durability in water-colour painting, and less in oil.

*Inorganic Orange.*

*Chrome Orange*, obtained by the action of an alkali on the yellow chromate of lead, is liable, though in a somewhat less degree, to the changes and affinities of that substance.

*Organic Orange.*

*Chinese Orange*, produced, it is said, from aniline, is of a rich, sober, orange-russet colour, and is very transparent. It is unfortunately blackened by sulphuretted hydrogen. Quite new.

*Inorganic Purples.*

There are no fugitive inorganic purples in common use, except those made by mixing red and blue.

*Organic Purples.*

*Burnt Carmine* is the carmine of cochineal partially charred. In colour it resembles the purple of gold, but not in durability, being, like carmine itself, fugitive.

A want of permanency is likewise possessed by the other cochineal purples, purple lake and violet carmine.

*Inorganic Browns.*

*Cadmium Brown*, prepared by igniting carbonate

of cadmium, was shown for a short time in the International Exhibition;—for a short time, because it had to be speedily withdrawn on account of its rapid whitening, which takes place in this way: When the white carbonate of cadmium is thoroughly burnt, it becomes converted into the brown oxide, or cadmium brown. By exposure, this brown oxide eagerly absorbs carbonic acid from the atmosphere—so eagerly, that in a few weeks it is once more a carbonate, and as purely white as before. This utterly worthless preparation is opaque, and of an agreeable yellow-brown tint.

*Organic Browns.*

There are too many browns permanent, whether inorganic or organic, for fugitive preparations to be usually employed.

*Inorganic and Organic Blacks.*

No fugitive blacks are now used.

*Inorganic Whites.*

*Lead Whites* are mostly carbonate of lead, and are sold under various names, such as flake white, cremnitz white, &c. They are all blackened by sulphuretted hydrogen, and are injurious to cochineal lakes, gamboge, orpiment, &c.

*Pearl White*, prepared from bismuth, turns black in impure air. It is chiefly used as a cosmetic by ladies, to whom an atmosphere free from sulphuretted hydrogen is especially desirable.

*Organic Whites.*

There are no fugitive as there are no permanent organic whites.

ON THE PERMANENCY OF PHOTOGRAPHS.

In May, 1855, a committee, consisting of Mr. Delamotte, Mr. Hardwich, Mr. Percy, Mr. Henry Pollock, Mr. Shadbolt and Dr. Diamond, was appointed by the Photographic Society for this purpose, His Royal Highness the Prince Consort contributing the sum of £50 towards the expenses of the inquiry. The special objects of the committee were thus stated:

1st. To report upon the evidence that can be collected with regard to photographs that have been printed for a long time; to ascertain whether there are any that appear to be quite unaltered by time, and, wherever it is practicable, to find out the methods by which they were prepared.

2nd. To conduct a series of experiments carefully, preparing photographs by different means, and exposing them under various circumstances, in order to ascertain what method combines in the highest degree the essential qualities of permanency and beauty.

Circular letters were addressed by the committee to photographers of experience and reputation, asking them to assist in the purposes of the inquiry by information and suggestions, and also by contributions of prints, with particulars of the method of producing them, in order that the fullest experiment and examination might be made. The results of this inquiry were furnished in the following report:—

*Evidence of Permanence.*

"The Committee have unquestionable evidence of the existence of photographs which have re-