

grains of common whiting. Filter and keep for 24 hours before using. Let the prints be toned slightly bluer than they are required to be when finished. Rinse them in water, and fix in a solution of hypo., 4 ounces to the pint of water. 20 minutes is ample time for fixing. Wash well.—*H. Cooper, Photographic News.*

Photo-lithography with Half-tone.

The production of printing surfaces on stone, zinc, etc., by the agency of photography, has occupied the attention of experimentalists for many years, and in many respects a high degree of success has been obtained. The process of Mr. Osborne, for the working of which a company has recently been formed in America, gives results in line and stipple which leave little to be desired. Mr. Ramage of Edinburgh; Mr. Lewis, of Dublin; Col. James, and many others, have also attained great excellence in the same direction. Messrs. Simonau and Toovey, of Brussels, have attained some success in the production of half-tone, and the attempts of Col. James in the same direction have not been without promise. Still the fact remains, that no process for the actual production of photographs from nature by means of photo-lithography is in practical working, or has hitherto established a position, and that such a process remains an important desideratum, any means of meeting which would be hailed with a glad welcome by all concerned in the graphic arts.

Unless we are mistaken in our estimate of a series of specimens before us, by Messrs. Bullock Brothers, of Leamington, a process which they have recently patented bids fair to meet the long-felt want most successfully, and to render with a fair amount of delicacy, the true photographic gradation of negatives from nature. The subjects before us, consisting of landscapes with variety of foliage and architecture, are exceedingly excellent, and present all the good points of a good photograph, perfect gradation and half-tone, and great brilliancy, differing little in general effect from good silver prints from the same negatives.

Messrs. Bullock have followed in paths already partially trodden, but have made such practical deviations and modifications as have led them to success where others have only failed. Their aim is to secure in the transfer a suitable grain, so as to obtain the kind of gradation possible in lithography, without producing a coarse or woolly effect. Among the various methods by which they propose to effect this end, the plan used in producing these examples seems to be at once the most practical and efficient. A transfer paper is prepared with a plain solution of gelatin, and when this is dry a grain is printed on it from an aquatint plate. Paper so prepared can be kept in stock, and rendered sensitive when required by immersion in a solution of bi chromate of potash. It is then ready for printing and transferring in the usual manner, and produces on the stone a photographic image, the continuous gradation of which is broken up into the stippled gradation of an aquatint plate. This is the broad principle; but it admits of much ingenious modification in practice, which is so far effective that it produces the most successful and promising examples of

photo-lithography with half tone which we have yet seen.—*London Photographic News.*

Re-touching Negatives,

BY J. GRASSHOFF.

By the above it is to be understood only a touching up and improving of the plates, which is especially of advantage in the portrait department, especially if it aid in the removal of freckles and brown spots which show themselves in the complexion, as disturbing and too dark. Following the instructions in a communication of Herr Hummel, photographer, I employed for this purpose the common soft lead pencil, and that in simple application to the varnished plate.

For parts to be very strongly re-touched (*e. g.*, in the case of enlarged copies of pictures, where the fibre or texture of the paper proves a disturbing cause) it is preferable to use a black "oil chalk" (*creta polycolor*). With this it is more easily drawn, especially in the dark part under the eyes, etc., which are often too dark. In order to have a clearer and better view or insight into the work itself, it is best to work at a lamp which has an opal glass shade. A round piece of pasteboard, bent so as to suit, and in which a hole is cut of 1½ to 2 inches, is put over this as a dark shade. The plate is so directed that the light is always chiefly thrown upon the head, or the part to be wrought upon. If one works by day, however, lay the plate on a fine thin-cut pane of glass; cover the varnished side with a piece of pasteboard, which has a sufficiently large piece cut out, hold the whole toward the window, and get the light cast only on the parts to be worked on. By this arrangement the eye is kept from over exertion, and protected from the dazzling light; and the attention is concentrated on those places which are just to be worked upon. One perceives then the defects to be covered more easily and quickly.

The lead pencil or the "oil chalk" adhere both fast enough to the layer of varnish. There is no danger at all of the one or the other coming off on the paper in the copying.

Spots and pin-holes are best closed with India ink.

A certain skilfulness, however, is always necessary for this easy method, especially in the fixing of the lights; but one can very soon and very easily make himself thoroughly acquainted with the work, since it is always easier to work with pencils than with brush and colors. It should be noticed that in places where there is pencilling, the oil chalk no longer adheres. In such places, therefore, where lead pencil has not sufficiently covered, India ink must be used to intensity.—*Photographische Mittheilungen.*

Photographic Pictures produced by Pressure.

At the last meeting of the Photographic Society, in Paris, M. Girard described some experiments illustrating Mr. C. Lea's recent discovery of the production of latent photographic pictures by simple pressure. A plate is prepared and sensitized in the usual way, and a sheet of note-paper is written upon with a style, so that the letters may stand in some relief; this paper is pressed upon the sensitized plate, and when the ordinary iron developer is ap-