

gallic acid on its removal from the camera; this may be deferred till the evening, or even the next day, or the day following.

The paper may be kept in a dark place for more than a fortnight without undergoing any alteration, and in this respect offers greater advantages than any of the photographic papers hitherto known. The solution of gallic acid is composed of 1 part of gallic acid, half part (0·5) of azotate of silver, and 200 parts of distilled water. The image is fixed as usual by hydro-sulphite of soda.

I have submitted to the Academy a series of specimens obtained by this process. It is so easily put in practice that, during a mission which I have just fulfilled for the Commission of Historical Monuments, I have often taken twenty-five or thirty photographs a day.

*Improvements in the Manufacture of Glass, Porcelain, Earthenware, China, and Artificial Stone.*—Patented October 2, 1851, by W. HONGE, of Cornwall.\*

For the purposes above specified, hornstone porphyry is adopted by the patentee as a material which has not been hitherto used.

*Claim.*—The application of this material, called elvan, to the manufacture of glass, porcelain, earthenware, china, and artificial stone.

For the manufacture of glass, it is powdered, washed, and mixed with other pulverized materials in the melting pot.

For the manufacture of porcelain, &c., it may be used alone or in combination with other materials. It is powdered, brought to a plastic state, moulded, dried, and fired in the usual way. It can likewise be employed for making glazes.

For the manufacture of artificial stone, it is used alone or combined with broken stone, and reduced to a plastic condition, moulded into blocks, dried, and fired in the usual manner.

*Experimental Researches in Electricity. Twenty-ninth Series.* By MICHAEL FARADAY, Esq., D. C. L., F. R. S., &c.†

In the present series of researches the author endeavors in the first place to establish the principles he announced in the last, with regard to the definite character of the lines of magnetic force, by results obtained experimentally with the magnetic force of the earth. For this purpose he reverts to the thick wire galvanometer before described, and points out the precautions respecting the cleanliness of the coils, the thickness and shortness of the conductors, the perfect contacts, effected either by soldering or cups of mercury; and marks the value of double observations, i. e. observations afforded on both sides of zero. The nature of the impulse on the needles is pointed out; being not that of a constant current for a limited or unlimited time, but of a given amount of electricity exerted, either regularly or irregularly, within a short period; and it is shown

\* From the London Civil Engineer and Architect's Journal, May, 1852.

† From the London, Edinburgh, and Dublin Philosophical Magazine, April, 1852.