

The developer I use is the ferrous oxalate made by a saturated solution of protosulphate of iron being added to a saturated solution of neutral oxalate of potash in the proportion of one part of the iron to the three parts of the oxalate; these are best when freshly mixed. If the plate has been rightly exposed, the image begins to make its appearance in about forty seconds, and grows under the action of the developer till it is full of detail. When the image shows faintly through the film on looking at the back of the plate, I stop the development, and wash the plate by a good rinsing in rain or distilled water, and then place it in the fixing bath, which consists of a solution of four ounces of hyposulphite of soda dissolved in a pint of water; this extracts all the silver which has not been acted upon by the light. The plate must now have a great deal of washing to rid it of the hyposulphite of soda; this is thoroughly done by placing it in running water under a tap for half an hour; if the film contains a trace of hyposulphite, it causes the image to fade out after a time.

Some plates have a tendency to frill; that is, the edges of the gelatine film, while wet, have a tendency to separate from the glass and to curl up. To prevent this, the plate may be soaked for about five minutes in a saturated solution of alum, and then again well washed and stood up on a sheet of blotting-paper to dry spontaneously.

Now I have thought it well, before giving you the demonstration, to tell you these details, that you may, bearing them in mind, follow the practical part with a clearer understanding of what I am doing, and why I do it, and at the same time the box and its brass contents have been getting warm, a not unimportant item in the proceedings, for if you begin your operations before this takes place, your glasses will become dewed with the moisture condensed on them, and your brass will be in a process of expansion from the heat, your image will accordingly be wanting in definition, and your plate assuredly spoiled. I will now proceed to photograph the blow-fly's tongue.

### Notes.

Gustave Doré, whose death was announced on Tuesday, interested himself a good deal with photography. When in London, he was a constant visitor at Rejlander's studio in Victoria Street, Pimlico, and they repeatedly worked together with the camera. Doré was attracted by Rejlander's graphic studies, which, as our readers well know, never knew the influence of baneful retouching. Probably the finest portrait taken of the great French artist is that by Rejlander, which should be valuable indeed at this moment.

An Italian authoress of rank, Madame Carla Serena, who recently took up photography in order to illustrate a work of travel she had in contemplation, has afforded abundant proof of the value of the art in this connection. Her book, *Le Tour du Monde*, is spoken of as one of the finest works of recent travel. We may have something more to say of Madame Serena shortly.

M. Crova seems to have made a little mistake in calculating the intensity of sunlight. At the last meeting of the Academy of Sciences, he tells us that he put down a cipher too much in his result, and this naturally makes all the difference. That is to say, instead of clear sunlight in the South of France being equal to 60,000 carrels (600,000 candles) it is only equal to 8,500 carrels (85,000 candles). This result is more in accordance with that previously given by Wollaston, but at the same time differs very greatly from Arago's calculation, who, comparing the luminous intensity of the sun to the flame of a candle, estimated sunlight as equal to 15,000 candles.

We cannot help thinking that, after all, the best comparison between sunlight and artificial light could be made by photography. Everybody knows, of course, that in photography it is simply the actinic rays that are recorded, while these are only a part of the luminous ones. But, as a matter of fact, the two are generally so inseparable that the measure of the one does for the measure of the other. An example of this is afforded by Crookes' light-mill or radiometer. In this the repulsive action is due to radiation only, but, for all that, it can be employed in testing the sensitiveness of gelatine plates with tolerable accuracy. So, in the same way, we think, photography might well be employed in comparing artificial light with sunlight; the result, at any rate, would be quite as trustworthy as any we have yet obtained of the sun, for no two experimentalists seem to get within a few thousand candles of each other.

A party of officers and men of the Royal Engineers have been selected at Chatham for the purpose of carrying out a series of experiments in ballooning, with special reference to the employment of balloons in field operations and during a campaign. The experiments are to begin in early summer, and photography is to take a part in them, cameras being manipulated both by hand and automatically.

The opening of the International Electrical Exhibition at Vienna is now definitely fixed for the 1st August. It will close on October 31st.

We are glad to see that Mr. York's work in connection with the systematic production of lantern slides illustrative of physics and science generally, has been recognized—as, indeed, was sure to be the case sooner or later—by lecturers who have to address large audiences. When we described Mr. York's establishment at Bridgwater we showed that his success was due as much to the care and trouble he took in choosing his illustrations as in producing them well and skilfully. We learn now that several scientific gentlemen—among others Dr. Andrew Wilson and Mr. W. Lant Carpenter—have joined hands with Mr. York with a view to producing a complete series of slides for the teaching of biology.

One story holds good until another is told. *Nature*, quoting from the Journal of the Russian Physico-Chemical Society, tells us that "the priority in photographing with the electric light" belongs to M. Levitsky, the St. Petersburg court photographer. This was in the winter of 1856, when a Bunsen battery of 800 elements, constructed on the occasion of the coronation of the Czar Alexander II. at Moscow, was employed at a lecture given by Professor Lenz, to demonstrate the new light. At this lecture, it seems, M. Levitsky obtained a negative by means of electric illumination. The year 1856 at once strikes anyone acquainted with the history of photography as a very late date on which to have secured an electro-photograph; and, indeed, but six months ago Mr. Henderson mentioned in these columns the circumstance of a Mr. Dow having secured a Daguerreotype portrait by the