

and in the end the silver, in a reduced condition, will be found at the bottom of the vessel in a pasty condition.

"I want you to be very particular about taking it," said a lady the other day, in ordering a cabinet portrait, "for I am going to send it away to be copied." Thus, an ingenuous customer to Mr. Photographer.

At the last meeting of the Royal Microscopical Society, a paper, by Dr. T. C. Kiaer, on "Micro-photography by Lamp-light," was read. The President (Professor Duncan, F.R.S.) remarked on the simplicity of the method detailed by Dr. Kiaer, and drew attention to the excellence of the photographs with which the paper was illustrated.

"Have the photographic effects of lightning, instances of which have been recorded at intervals since the statement of Benjamin Franklin, in 1786 (in reference to a man struck by lightning, while standing opposite a tree, having an exact representation of the tree printed on his breast), again received confirmation?" asks a contemporary. The question arises from the fact that at the last meeting of the Royal Society of Edinburgh, a photograph of the arm of a boy, which had been struck by lightning, was submitted for inspection by Mr. Milne Howe, and either on or under the skin was the representation of foliage, in form resembling a yew tree. This photograph, of course, is that of Mr. Bruce, to which we referred the other day. Professor Tait called attention to these markings, and added that the matter was well worth the consideration of anatomists and physiologists.

At the same meeting a note was read from Professor Piazzzi Smyth, contending that spectroscopists who held that in the sun's atmosphere all, or the most ordinary, elements were decomposed into simple bodies, were in error. The ground for their belief was, that in terrestrial experiments an apparent coincidence between the lines of the spectra given by two such substances as iron and nickel had been found, and this line was held to be not really either iron or nickel, but a "basic element," common to both. Professor Smyth, however, urged in his note that more perfect spectroscopic power had demonstrated that these lines were not coincident.

We have to announce the death of M. l'Abbé Laborde, at the age of seventy-five. His name is familiar to all who are cognisant of the early progress of photography, and he it was who, in France, was the first to suggest—as Fargier was the first to carry out—the plan of developing carbon prints from the back, thus producing impressions in half-tone. This discovery, which he shares with Burnett, Swan, and Blair in Great Britain, may be said to have established carbon printing as a practical process.

M. Audra communicates some experiments he has made in every-day photography, with a view to determine how fast a shutter should act in order to secure sharp pictures of ordinary objects in motion; and he comes to the con-

clusion that an exposure of not less than  $\frac{1}{500}$  of a second is necessary. Thus, in the case of an omnibus, he says that it moves at the rate of 3.33 metres per second (say between three and four yards), and therefore if you expose for  $\frac{1}{50}$  of a second, the vehicle moves during the time as much as .06 or .07 of a metre (say two to three inches). Anything like a sharp picture, in these circumstances, M. Audra holds to be impossible.

Nothing is more marked than the change which has taken place of late years in photographic backgrounds. The blank expanse of moorland, with the nebulous balcony, à propos of nothing in particular, which used generally to accompany a lady without bonnet or mantle, has long since disappeared, and so has the impossible rustic fence, and the fountain which would always come in the wrong place. It would seem, therefore, almost superfluous for the *Photographic Times* to put forward as a novelty the interposition of a transparency of a landscape between the lens and the plate, so as to secure a pictorial background, and so do away with the necessity of having a painted background. The idea is an old, and not a particularly successful one.

Paper appears capable of being used for anything. After paper railway wheels, paper canoes, and paper roofs, it is surely not absurd to suggest that paper might be tried for the dark backs of cameras! There is no moisture to affect them, they could be made rigid enough for all practical purposes, and would be an immense saving in weight and portability.

Two German patents are worth noting. The first (No. 22,091) is for a method of enamelling, by means of which bas reliefs similar to cameos may be produced, and in which possibly the Woodburytype process might find application. The object is to form a pressed enamel on glass, a mixture of dry enamel, thick pine oil, and gum-dammar being laid upon the glass surface in a half-dry state. On drying, the design or picture is pressed in and the enamel burnt, it being possible thus to reproduce the forms of figures in slight relief, as well as the feathers of birds, and veins of leaves.

The other German patent (22,313) is for treating unglazed pottery so that you may write upon it or otherwise produce designs with aqueous fluids. The process consists in coating the absorbent clay surface with whey, which is obtained by adding a small quantity of acid to skimmed milk, and separating the precipitate by filtration.

M. Duchausson has communicated to the Academy of Sciences the results of no less than 32,460 observations on clouds, estimating the density of these and their frequency at various times of the year. As the photographer is one of the most interested of beings in the matter of sunshine and cloud, we may quote one or two data from M. Duchausson's statistics. Speaking of late years there was a minimum of cloud in 1871, and a maximum in 1878.