

# THE PHOTOGRAPHIC NEWS.

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## CONTENTS.

	PAGE		PAGE
The Lime Toning Bath.....	373	A Photographic Glance at Melrose Fountains, North Wales. By the Rev. J. C. Browne, M.A. ....	380
Photography at the Assizes.....	374	Correspondence—Lime Toning—Ebonite Baths—A Case of Need .....	382
Scientific Gossip .....	376	Photographic Notes and Queries—Moisture and Actinism—New Transparent Medium, &c. ....	383
Dry Collodion—the Tannin Process. By G. De Vylder.....	377	Talk in the Studio .....	384
Macrophotography, or the Art of Taking Enlarged Pictures of Photographs .....	378	To Correspondents.....	384
A Photographic National Portrait Gallery .....	380	Photographs Registered during the past Week.....	384
Doings of the Sunbeam .....	381		

### THE LIME TONING BATH.

Nothing is more perplexing than the occasional discrepancies in evidence as to the specific results of some given formula. A adopts a certain toning process, and by patient experiment and watchful care he obtains perfect success. He finds great advantage from certain minor modifications, and after having, as he believes, obtained great certainty as to the most successful proportions and manipulations, he publishes for the benefit of his brethren in the art the results of his experience. B, who has been anxiously aiming at the tones described, at once tries the process; but he gets no better results than he did with the various baths he had tried before; some of the prints are pretty good; but the majority are flat, feeble and brown, or grey and mealy. The fact is, his negatives are thin and veiled, and can never yield such prints by any process; but he does not take this into account in his failures: indeed, he is probably scarcely conscious of it. C also tries the process, he has succeeded well hitherto, but is always anxious to improve. To his disgust every print is bleached, mealy and useless. He has followed the formula accurately; but his paper, his gold, his mode of printing are altogether different from those of A, and his results are also different, with a vengeance. D also tries the method. He is never much in the habit of weighing, he can measure pretty well with his eye; some of his conditions he knows are slightly different, but that is a thing too trivial to affect the matter much, he says. He fails entirely, and at once declares his conviction that A never succeeded with the process as he described it; but that some little important secret is held back. "They never do tell all they know, these fellows who profess to be so liberal!" he exclaims, and is satisfied that the process was described either entirely falsely, or with a reservation. Perhaps E, F, G, and the rest of the alphabet, succeed perfectly; some of them say so; but the majority are not much in the habit of talking, and still less of writing, and when they hear of the failures of the others they simply shrug their shoulders and say, "Oh, they never succeed in anything!"

We have recently called the attention of our readers afresh to the special characteristics of the toning bath of gold and lime, not as necessarily recommending it for all purposes, as, everything considered, we prefer the acetate bath for general use, but as giving certain qualities which many professional photographers are desirous of obtaining. We have published several formulae, which we had either tried ourselves, or the results of which we had seen. We have had, since we published these formulae, many communications on the subject, stating singularly discrepant results. There have been many failures, of which those detailed in the humorously pathetic letter of "Chamealion," which we recently published, may be taken as a sample. At the time we described Mr. Parkinson's formula

we had not tried it, but we had seen some hundreds of prints with a uniformity of rich black tones which we had not seen equalled before.

We have within the last week or two tried the formula several times, just as we stated it, and with the most satisfactory results. We first tried it in an hour after mixing. The result was, that on one sample of paper we obtained good prints with a trace of mealiness, but on another sample from the same maker, the tone and quality were in all respects good. When the solution had been mixed six hours, we tried it on another sample of paper which had been sensitized and printed by a friend, who had brought the unfixed print to show us the quality of a certain negative. The paper was old and discoloured, but the toned print was perfect in tone and purity. In all the prints toned on the first day there was a little bleaching action, but trying it again, when four days old, we were surprised to meet with an action rarely secured in the toning bath; it very considerably increased the amount of contrast in the print, by toning the shadows a deep black, without in any appreciable degree bleaching them, or reducing their depth; and the sample of paper giving some degree of mealiness the first day was now totally free from it. The chloride of gold was an ordinary sample, we believe, of French manufacture, very slightly acid. The chloride of lime had been kept in a well stoppered bottle for two or three months. We tried several samples of paper, which had been sent to us for trial at different times—they consisted of Lampray's enamelled paper, and his Sutton's patent paper; of Elliott's albumenized paper; of Hart's albumenized paper; and one or two others we don't remember.

What, then, are the special advantages of the lime toning bath, and what are the causes of the difficulties which occur in its use? Its advantages are chiefly to the portraitist who desires a pure black tone. Such a colour is rarely desirable for landscapes, and not always for portraiture. But the lime bath possesses this especial characteristic: when the deep shadows of the print toned in it are black the half-tones are of a warm neutral tint. With some toning baths it is difficult to get a black at all, if the print be pushed beyond a deep purple it becomes a greyish blue. With others, when the black tone is attained, the most delicate half-tones surrounding the high lights are gone altogether, and the remainder are grey and cold. The advantages of the lime bath are that it gives a very deep rich black to the shadows and a warm tint to the half-tones. The difficulties arise partly from the fact as explained by Mr. Hughes in our last, that it is very sensitive to the slightest change of conditions, and partly from the fact that the chloride of lime is a most inconstant and uncertain compound.

Chloride of lime is a somewhat unscientific name for a somewhat indefinite preparation. It is formed by passing chlorine gas through hydrate of lime. At first sight this would appear to be a simple mechanical mixture, the lime serving as a vehicle for carrying the chlorine; but an odour