THE PHOTOGRAPHIC NEWS.

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A NEW PROCESS.

LAST week we found it necessary to caution our experimental readers against building hope upon a process originally announced by Mr. Bellini in our columns, and revived when we had forgotten it, in the columns of a French contemporary. We have this week to announce to our readers the discovery of a process, scarcely less startling in its claims than the one to which we have referred, and in one of its features, at least, analagous to it.

Unlike Mr. Bellini's process, this comes before us with credentials, which entitle it to attention; and we can speak personally, so far as very limited time for experiments permits, of its success.

The chief aim of the process is to dispense with the use of a bath of nitrate of silver, or of any other substance, in the production of negatives on glass. A preparation is poured upon the plate, whereby an even, homogenous film is produced, which is sensitive to light, without further treatment of any kind. The exposure and development are then the same as in the ordinary process, either the salts of iron, or pyrogallic acid being used as a developer.

The conception of the idea is due to Captain Dixon, whose photographs of Indian temples and other subjects, many of our readers may remember in the exhibitions of the Photographic Society, and of the Architectural Photographic Association. The details have been worked out, so far as they have gone, by our contributor, Mr. Samuel Fry, in conjunction with Captain Dixon. As we conceive it to be very possible that the germ of a very considerable modification or revolution in the ordinary negative process may spring from this discovery, we may state briefly, in detail, how the matter stands. Mr. Fry called upon us one evening this week and showed us some stereoscopic negatives, and asked for our opinion of their character. They were red vigorous negatives, some of which were much over-exposed. One marked as having had three seconds and a half was slightly under-exposed; and another marked as having been exposed seven seconds was nearly right, but would have done with a second or two less. A portrait combination, with small central stop, had been used. We were then informed that these negatives had been produced without the aid of any bath of nitrate of silver; the sensitive film being produced at one operation by means of a preparation poured on the plate.

The following morning we attended at the laboratory at King's College for the purpose of testing, in conjunction with Mr. Sutton, Mr. Rouch, Mr. Fry, and Captain Dixon, the results of the new preparation. It unfortunately happened that there was a foggy bad light, which rendered photographic experiments comparatively useless. Some pictures were obtained, but they were not perfect.

We have ourselves since taken three or four pictures by means of the preparation. In our hands, so far, it has proved a trifle less sensitive than wet collodion, and there is also a little lack of vigour. We have, just before writing these lines, taken a negative, with an exposure of about forty seconds, without sun, and dull light, a Dallmeyer's portrait lens of about six inches focus, and three-eighths stop. The negative is perfectly full of detail, but a little wanting in vigour.

Much probably remains to be done in settling the precise formula for giving the best results, both as regards sensitiveness and vigour; but we think that it is obvious that a compound, containing in itself all the necessary sensitive salts, in proper proportion and due relation, must possess advantages altogether unattainable by the use of nitrate baths where an uncertain amount of iodide of silver is formed, plus an indefinite quantity of free nitrate, plus an indefinite amount of other unknown matter.

Steps are in progress for patenting the preparation which, by the time these lines are in the hands of our readers, will be completed. The matter will then be put to the practical test, which must decide its worth.

Since the above remarks were written, we have received a letter from Mr. Bellini, which, as it bears upon the question, we may refer to here. Mr. Bellini thinks we have done him injustice in the caution we felt it necessary to give experimentalists, in reference to his alleged discovery. He asks us to suspend judgment until next week, when he will reply, at length, to our remarks. The best reply Mr. Bellini can make is to give actual demonstration. If he has received any injustice, he has only himself to blame. We gave him a fair field, and took some trouble to allow him every opportunity of substantiating his statements. From whatever cause, he did not do so: and the last personal statement he made to us was, that as he had not succeeded in his operations in our presence, he would send us, in a few days, a bottle of his preparation for our own experiment. Six months have now elapsed, and it has not arrived.

MODIFICATION OF THE FOTHERGILL PROCESS.

WE call the attention of our readers interested in dry photography to a modification of the Fothergill process, suggested by Mr. Hannaford, by which considerable uniformity of result and immunity from stains is obtained. Instead of adopting the plan of a partial washing, whereby an uncertain amount of nitrate of silver is left in the film, or the use of a second weak silver bath, giving a definite amount of nitrate, but which involves extra trouble, Mr. Hannaford washes the excited film thoroughly in an unlimited amount of water. This being done, there is no silver left to form the albuminate of silver, or other compound of salt, when the preservative is applied. Mr. Hannaford, however, forms that salt, whatever it may be, in his preservative solution, by the addition of a given amount of nitrate of silver to it.

It must be evident that one essential cause of stains and irregular deposit is here eliminated. It is clear that on the application of a preservative solution, forming a compound salt, with the free silver already in the film, a very different result is produced at the first point of contact, to that which occurs when the solution has spread itself to the furthest part of a large plate. In Mr. Hannaford's modification, however, no new compound is formed on or in the plate, but, being applied in one homogeneous solution, an even and harmonious deposit of silver in development is the result. The details are given in the report of the Experimental Committee of the South London Society, published in our last, and in the present number.

It is only just, here to remark, that whilst to Mr. Hannaford is due the careful working out of this plan, the idea was suggested in our columns nearly three months ago by Mr. Bartholomew, of Fareham,* and we have before us an excellent negative taken by that gentleman on a plate prepared by that method. At the time we made a similar suggestion to that made by Mr. Borchert at the South

* See p. 53 of present volume.