

plate must be exposed two or three times as long for the pyrocatechin developer as for the ordinary ferrous sulphate developer—consisting of 5 parts ferrous sulphate, and 3 parts glacial acetic acid in 100 parts water. The precipitated silver possesses an exceedingly fine grain, and is much darker in colour than when thrown down by ferrous sulphate.

2. A dilute solution of pyrocatechin, mixed with a few drops of silver nitrate, may be used for intensifying negatives, the same as the pyrogallie intensifier; if the solution be too concentrated, or the action be continued too long, reddish-brown spots will be produced.

3. When a dry bromide emulsion plate, after exposure in the camera, is treated with a five per cent. solution of pyrocatechin to which has been added ammonia solution—in the proportion of 2 or 3 drops to every 20 cub. cents.—an image is developed very full of detail. The exposure must be, however, a somewhat longer one than is required for the ferrous oxalate or the pyrogallie developer, and the development itself is somewhat slower in action. By increasing the proportion of ammonia to 6 drops the development is somewhat quickened, but fogging will make its appearance. Potassium bromide keeps the image clear, but considerably retards the developing process. When fixed, the negative has a greenish brown or olive-brown colour. Pyrocatechin in an alkaline solution acts much better as a developer for dry plates than it does for wet plates.

4. Resorcin is perfectly useless, either as a developer or as an intensifier, in the wet collodion process. On a wet plate, in fact, it will probably produce no image at all.

5. Silver bromide emulsion plates are not so readily developed with a 5 per cent. solution of resorcin as with a similar one of pyrocatechin; a solution of resorcin containing 6 drops of ammonia to every 20 cub. centim. was unable to produce an image, whereas the pyrocatechin developed a very good picture in the same time. By adding 20 drops of ammonia, and exposing for three times as long as is requisite for the ferrous oxalate developer, a clear but thin negative is obtained, which, by transmitted light, has a reddish brown, and by reflected light a greenish yellow, colour.

We have thus shown that all the isomeric bihydroxyl derivatives of phenol—hydroquinone—pyrocatechin and resorcin—can, with the addition of more or less ammonia, be used for developing dry plates of silver bromide; hydroquinone and pyrocatechin are the most powerful, while resorcin possesses a less energetic action. Further, that pyrocatechin plays a subordinate part as developer for wet collodion plates.

In conclusion, we may mention that the antiseptic properties of resorcin, which it appears to possess in common with carbolic acid, seem to render it probable that it might be used with advantage to prevent decomposition in gelatine emulsions. It is more readily soluble in water than either phenol, thymol, or salicylic acid, and does not reduce gelatino-bromide of silver.

Correspondence.

TRANSFER BY SIMPLE CONTACT.

SIR,—In your most interesting article "On the Transfer of the Visible and Invisible Photographic Image by Simple Contact" you say that my opinion, that in the case of gelatino-bromide of silver plates the action of light continues after exposure, is in opposition to the opinion of all other experimenters. In the article on Gelatino-bromide of Silver by Dr. Monckhoven, at page 596, the following occurs: "But by deferring the development too long it will probably happen that the effect of the light has diffused itself over the whole film." Now I take it that this refers to a similar

continuing action to that observed by me, and therefore my opinion is not altogether unsupported. From my observations and experiments, I believe that this action varies somewhat according to the method by which the bromide of silver is produced.

The following may be of interest to those who are experimenting in this direction. Some gelatino-bromide plates were exposed during the day, and in the evening were taken from the slides and packed (I being on a tour, and having no convenience for developing). Inadvertently the film of the outside plate was in contact with a printed paper. About ten days after, when developing, I found that, besides my picture, I had a positive proof of a portion of the *Daily News* on the same film.

THOMAS BATES BLOW.

OXALATE AS A RE-DEVELOPER.

SIR,—Finding some trouble in intensifying gelatine with mercury and ammonia, I thought I would try the effect of an immersion in ferrous oxalate, and found that it gave great intensification; applying afterwards the mercury and ammonia. Any amount of intensity seemed to be got. No fog, but a very non-actinic colour. I tried this with several plates, both negatives and transferrers, and succeeded with all.

I see in a contemporary that the writer of a letter on "green fog" alludes to the value of carbonate of ammonia for gelatine development. I shall be glad to hear if any of the readers of the NEWS have tried it, as I suggested in your columns two or three weeks ago. It ought to give negatives with greater vigour and contrast.

FRANCIS TURTON.

WANTED, A WORD.

DEAR SIR,—Mr. Palmer's letter rather strengthens my argument, and his quotation from Sir Joshua Reynolds confirms its correctness. Sir Joshua, in speaking of the picture of St. Sebastian, was not speaking of the *subject* himself (who, if he sat at all, would have sat as the *subject* from whom the picture was painted), but of the *model* from which the imaginary portrait was copied.—Truly yours,

P. C.

DEAR SIR,—In your last impression a letter appears with the above heading. Now whether *model* or *subject* would be the more preferable term to employ in place of *sitter*, it is not my intention to discuss. Possibly *object* would in many cases be more correct than either. The matter, however, is not of the slightest *actual* importance, because there is no word that will answer under all circumstances.

I fail to see, however, that your correspondent strengthens his case in any way by the last two lines of his letter. The "dragging in" of passages of Scripture unnecessarily is hardly to be commended; but, in any case, the quotation should be given correctly.—Yours truly,

F. A. BRIDGE.

CLEANING OFF GELATINE PLATES.

DEAR SIR,—Can you or any of your readers furnish me with a ready and efficient method of cleaning the gelatine films off waste dry plate negatives? I, in common with many others, am beginning to find these accumulate rather more rapidly than is desirable.—I am, sir, yours obediently,

BROMO.

Proceedings of Societies.

LIVERPOOL AMATEUR PHOTOGRAPHIC ASSOCIATION.

THE monthly meeting of this Association was held on Thursday, the 30th ult., at the Free Library, William Brown Street, the