

PHOTOGRAPHIC NOTES.

Pointers in Photography.

From the *Pharmaceutical Journal*, of Australasia.

CONTRAST.

If we have an evenly lighted view deficient in contrast, shortening the exposure will increase the contrast, and prevent flatness in the resulting negative, while, on the other hand, increasing the exposure will soften down a view in which the contrasts are too strong.

DEVELOPMENT.

Development is the complement of exposure, the best photographic result being attained by a normal exposure followed by a standard development; at the same time, under-exposure may be to a certain extent corrected by strengthening the developer, and, on the other hand, even very considerable over-exposure may be neutralised by judicious alterations in the developer.

THE ESSENTIALS OF A GOOD SHUTTER.

A shutter should be (1) free from vibration, (2) adjustable to give various definite exposures, (3) adjustable to vary the relative exposures given to the foreground and sky, (4) portable, (5) simple in construction, (6) should occupy as small a portion as possible of the exposure in opening and closing, and (7) should not be liable to be easily damaged.

SWING-BACKS.

Swing-backs are essential to enable the plate to be placed parallel to the plane of building when the lens cannot be so placed as to have its principal axis perpendicular to the plane of the front of the building, since this parallelism is essential, even with rectilinear lenses, to the reproduction of straight lines. The more fully the building occupies the plate, and especially with high vertical lines near its extremities, the more essential this parallelism is.

THE PERFECT SHUTTER.

An ideal shutter is one which, if it were possible, would open to its full aperture suddenly and without lapse of time, and having remained open a certain time, would close thus suddenly again. Such a shutter would possess the summit of efficiency, but is impossible of construction, and is only spoken of as a standard for comparing other shutters. It is right to make such a shutter the ideal of attainment, generally speaking, although for a certain class of shutter, working within certain limits of speed, as I shall point out, a shutter of low efficiency will give far better results.

PHOTOGRAPHIC CONTROL.

A fairly accurate simile of the control of the photographic artist over his developer is supplied by the control of the engineer over his engine. The engine is mechanical, it is true, but it may be made to go slowly or quickly as the guiding mind may decide. In our case, pyro

may be said to be the engine and ammonia the steam. For pyro, the moving force, is practically powerless without the infusion of some vitality, which is supplied by the ammonia. Bromide is a safety valve, and keeps the boilers from bursting. But the motto of intelligent development is, keep your finger on the regulator and don't let all the steam in with a rush. Have a safety valve, but don't depend upon it to keep the engine from running away.

Fluoreal.

Fluoreal is a new developer containing sodium sulphite, lithia in the proportion of 6 parts per 1000, and fluorescein, the function of the latter being to arrest any light waves of short wave length that may have penetrated into the developing room. —*Photography Annual*.

Paramidophenol.

Citric acid is one of the best solvents of this reducing agent. A solution of 100 parts of the acid in 100 parts of water at 17° C dissolves about 97 parts of the paramidophenol. A satisfactory formula is:

Water	.....	50 parts
Paramidophenol citrate (conct. sol.)	.....	1 part
Sodium sulphite (conct. sol.)	.....	4 parts
Sodium carbonate (conct. sol.)	.....	5 parts
Caustic potash (10 per cent.)	.....	2 parts

Or, for a weaker developer:

Water	.....	150 parts
Para-citrate	.....	2 parts
Sodium sulphite	.....	50 parts
Sodium carbonate	.....	50 parts

Use concentrated solution as above. —*Amer. Jour. of Photography*.

Pyro-Stained Negatives.

Five causes are given for the yellowing or staining of negatives developed with pyro: (1) An insufficient quantity of sulphite in the developer; (2) prolonged development of under-exposed plates; (3) insufficient washing before fixing; (4) insufficient fixing; (5) an exhausted hypo bath. —*Amer. Jour. Photography*.

Carbon, or Pigment Printing.

F. GOLDBY, in the *British and Col. Druggist*.

It has often occurred to me as somewhat strange that this most fascinating of all photographic printing processes is generally so much neglected by amateurs. The simplicity and ease with which beautiful and artistic results are obtainable, and the permanency of the finished prints and its adaptability to the making of enlargements, all combine to make the process indispensable to every amateur who wishes to do good and, above all, permanent work. I cannot within the scope of a short article give anything like a complete description of pigment printing, my object being to correct any impression that may exist as to any insuperable diffi-

culty in working. For full information on the subject I must refer the reader to the little manual published by the Autotype Company, which deals simply and fully with the subject.

The process depends upon the sensitiveness to light of gelatine which has been treated with bichromate of potass, this sensitiveness being not in producing any visible image, but in rendering the gelatine insoluble in warm water whenever it has been exposed to light. To prepare the tissue, as it is called, a stout paper is first coated with a thick film of gelatine, with which is incorporated the pigment, finely ground, and of any color required consistent with permanency. This coated paper, when dry, is sensitised by soaking for a short time in a solution of bichromate of potassium or ammonium, and dried in an even temperature in the dark, or in non-actinic light, and when dry is ready for exposure in the printing frame. Now, as no visible image is produced, recourse must be had to an actinometer, which usually consists of a band of ordinary sensitised paper, so placed in a small box that it can be drawn forward, and exposed to light through an aperture in the cover. When the paper under the action of the light has colored to the depth of the index tint given, it is said to have registered one tint; again drawn forward to expose a fresh surface of the paper, and again having reached the standard depth, it has registered two tints, and so on. It is, therefore, quite easy to determine with a little practice the number of tints necessary for any negative. But in my own practice, I have found it simpler, and quite as convenient, to select another negative of about equal density to that which I wish to print from in carbon, and expose a small strip of gelatine chloride printing out paper behind it, and place both frames in the light at the same time, for carbon tissue being of about the same sensitiveness as silver paper, or rather more sensitive, when the latter is nearly printed the carbon will be fully exposed. Before "development," the tissue is soaked for a few minutes in clean cold water, and must then be transferred to a "temporary support." This is accomplished by simply squeezing it whilst wet face downwards into close contact with either a piece of matt surfaced opal, or a piece of the stout paper prepared with resin, supplied by the Autotype Company for the purpose. The temporary support should always be rubbed with a solution of wax and resin in turpentine, before use, in order to facilitate the final transfer. After being allowed to rest for a few minutes between blotting paper, it is ready for development; the development consisting simply of hot water at a temperature of about 100° F. A short time after immersion in this, the pigmented gelatine will begin to ooze from under the edges of the paper, which can then be lifted off, leaving the image buried in the excess of pigment and gelatine upon the temporary support. By gently laving or rocking the dish at the same time keep-