ner, as though no great contrast existed, we should get a negative better suited to the dust-hole than the printing frame. The dress would be so dense as not to print at all, while the face would be much over-printed.

One way of correcting would be to slightly over expose; that is to expose for the yellow skin, by which time the white dress would be much over-exposed, and, as every school boy knows, an over-exposed plate, or portion of same, develops thinly, so we see that by simple over exposing, the contrast to an extent is cancelled.

A better way to correct is in development thus: commence development with a rather weak developer, very weak indeed in pyro and bromide; and here let me say care is necessary, or fog will result. Watch patiently, adding small doses of the accelerator till all the detail you require is obtained. The negative will then be thin all over, which will simply need to be strengthened up with a dose of pyro and bromide, so that by simply keeping back the pyro we can modify the contrast to almost any extent. One more way is by using a small stop in the lens, but for portraiture it is of no use for two reasons, firstly, that it gives too much detail to be artistic; secondly, that it makes the exposure too long.

To produce contrast we slightly under expose or develop quickly, by keeping back the accelerator, and using a developer strong in pyro and bromide.

Take, for example, the portrait of a person with a red shin, yellow or black dress. If a full exposure be given, a flat result will be obtained, the person having the appearance of having been flattened into the background.

To correct the flatness and produce contrast, slightly under-expose, using a fairly large stop in the lens, and develop with the developer strong in pyro and bromide, using a fair dose of the accelerator at the last moment to bring out the details.

In speaking of the merits of various formulæ, we have a difficult subject in hand, as most, if not all, the makers of dry-plates issue a formula with them best suited for their development. Some of them advise a weak developer, while some advocate one strong in all its constituents. For my part I am in favor of a strong developer handled with care. I can speak from practical experience that the Ilford plates developed with the makers' formula will give results that leave nothing to be desired. I do not for one moment disparage the goods of other plate makers, but simply wish to say that I am able to obtain better negatives with the Ilfords, finding them easier to work and capable of bearing a stronger developer (one which contains caustic soda) without frilling or staining.

A simple arrangement I have found of use when developing very rapid plates is to cover the developing dish with a sheet of orange or ruby glass let into a cardboard lid, for any rapid plate, if exposed for a sufficient length of time even to a ruby light, will be affected by it.

After the development has fairly commenced, a brighter light may be used with safety. I find it best to work with all the light obtainable (that is safe), to be able to correctly estimate the density.

Makers of glass bottomed dishes speak loudly in their favor, but I have found it difficult to judge of the density owing to the darkening of the developer.

In conclusion, I must place pyro-ammonia as the best negative developer, and leave iron and hydroquinone (for the development of bromide papers, opals, lantern slides, etc.) to fight the battle, giving the preference to the iron developer.—*Ph. Journal.*

Contretypes or Positives Direct in the Camera.

The plate is exposed in the camera and developed as usual, care being exercised, however, that it is not fogged. It should be then well washed till quite free from the developer. The following solutions are required:

A.

Saturated solution of chrome alum.

B.

Boric acid	1.5	parts
Water	500	"

C.

Solution A	20	"
" B	10	"
Water	1000	"

D.

Potassium bichromate	25	"
Nitric acid	10	"
Solution A	25	"
Water	1000	"

E.

Potassium hydrate	2	"
" bromide	2	"
Water	1000	"

Place the developed and well-washed negative in solution D till the black image is quite converted into a red one; then wash well in three successive baths of solution C and soak in solution E till the red image disappears, and thoroughly wash. Expose the plate to diffused light for about 30 seconds, or to lamp or gaslight for about five to ten minutes, and then develop with a well-restrained eikonogon or paramidophenal developer. The idea is not new, but may be useful. -Signor Corsi *in Bull. del Soc. fot. Ital.*

PHOTOS THAT YIELD COLORS.—At the last meeting of the Paris Academy of Sciences some colored photographs of the spectrum on albumen and bichromated gelatin, by M. G. Lippman, were exhibited. It was stated that albumenised and gelatinized plates, soaked in bichromate of potash, may be employed for photographing in colors. They are used like silver salt plates, being placed so that the mercury is in contact with the film. The colors will appear immediately after immersion in water, which developes and also fixes the image. It disappears on drying, but reappears as soon as the plate is soaked. The colors are very brilliant, and visible at all angles. Those of gelatin plates are brought out by simple breathing. The theory is analagous to that of silver plates, the maxima and minima of interference producing hygroscopic and non-hygroscopic layers with varying refractive indices.

AN EXTRAORDINARY LENS. When a spherical glass lens was found in one of the tombs of the Pharaohs, it was looked upon as, perhaps, the most wonderful lens in existence, though later investigations threw doubt upon the belief that the object had ever been used as a lens for any optical purpose. Be this as it may, we think that the palm will be carried off by Professor Dewar's wonderful lens, exhibited in his lecture on Liquid Atmospheric Air. It was composed of liquid oxygen enclosed in a spherical vacuum vessel. Its temperature was 200 below zero, a point at which, as we have previously shown, all chemical action, except that produced by light upon a photographic plate, ceases. Yet, cold as this lens was, it was able to concentrate the rays from an electric arc, permitting them to pass through easily and ignite a piece of black paper held in their focus. *Brit. Jour. of Photography.*

ENLARGING FILMS. The Monitor publishes a process for enlarging photographic films without enlarging apparatus. The method is familiar enough in England, and depends upon the stretching of a film loosened by hydrofluoric acid. The formula for the stretching solution is given as follows:

Hydrofluoric acid	1	part.
Citric acid	4	"
Glycerine	1	"
Acetic acid (glacial)	1	"
Water	32	"

All by weight. The unvarnished film laid in this solution gradually detaches itself from the plate, and enlarges itself at the same time. A final rinse in water while the film is transferred to a larger plate, concludes the operation.

TO RECOVER FOGGED PLATES.—Make a solution as follows:—

Chromic acid	60 gr.
Bromide of Potassium	60 gr.
Water	10 oz.

And immerse the plates for five minutes. Afterward wash very thoroughly, and rear up to dry. Or instead of the above, make the following:—

Bichromate of Potash	1 oz.
Hydrobromic Acid	2 dr.
Water	10 oz.

If Hydrobromic cannot be obtained, use Hydrochloric Acid or a soluble Bromide, in the last case a few drops of Sulphuric Acid being added to the solution. Use as before.—*Pacific Coast Phot.*

FLUOREAL.—Fluoreal is a new developer containing sodium sulphite, lithia in the proportion of 6 parts per 1,000 and fluorescein, the function of the latter being to arrest any light waves of short wavelength that may have penetrated into the developing room. – *Photography Annual.*

Phenol sulphoricinoleate is a solution of 20 parts pure phenol.