

Formula for Toning N. U. Aristo Paper without Gold "Combined Bath."

Mr. J. J. Millikin, who printed our pictures this month, and who has been very successful in working Aristo, has very kindly given us his toning formula for publication. The simplicity and cheapness of this formula and the fine results to be obtained from it should bring it into general use.

No. 1.

Hypo 3 oz.
Water 16 "

No. 2.

Water 16 oz.
Nitrate lead 1 "
Pulv. alum 1 "

When contents of No. 1 and No. 2 are dissolved, add *No. 2 to No. 1* and let stand twenty-four hours, and filter into toning tray before using. Can be used repeatedly by adding a little hypo occasionally. Prints should be immersed *face up* without washing, to avoid air bells. If the whites show any tendency to yellow, immerse for a few seconds in a solution of bluing, very weak (purple Diamond dye). Don't allow prints to wash over night; one to two hours is sufficient.

Henry J. Newton, speaking of this no-gold toning bath in the *Times Almanac* says:

There is, I know, a popular prejudice against any process of toning in the hypo bath, and the production of what has been termed sulphur tones. What may have been the result with similar processes in the treatment of albumen paper should be no criterion by which to decide this question of permanency of gelatine paper. The question will, of course, be whether prints so treated and toned will be permanent. If the keeping of the prints made on this new gelatine paper should depend on the thorough eradication of the hypo, I would recommend that it be done with nitrate of lead in the following way:

Water 16 oz.
Nitrate of lead 48 grains

The lead in dissolving will produce a trace of carbonate of lead; this *must* be dissolved before using, and is done by adding a few drops of acetic acid.

After the prints have been washed sufficient to remove the surface hypo, immerse them for five minutes in this bath and then wash in clean water for five minutes, and every trace of hypo will be removed. This bath of lead nitrate should not be used stronger than I have given it, because of its toning properties, and if used stronger would carry the toning too far before the decomposition of the hypo was effected.

Very fine tones and brilliant prints can be produced with this toning and fixing bath on the commercial ready-sensitized albumen paper, but by very different treatment. Prints on this paper, in the first place, must be thoroughly washed, and then fixed in a fresh solution of hypo. When fixed they should be immersed in the lead, hypo and alum bath until the desired tone is obtained, then washed in the usual way. The brilliancy of prints so prepared cannot be surpassed on albumen paper. The prints on either paper dry much darker than they appear when wet.

How to Copy a Blue Print in the Camera.

It has been our misfortune to have this problem brought before us in a practical shape, and, in explaining how it was done, we think we shall be able to demonstrate the utility of the modern color-sensitive plate. Any old-time photographer will say that it cannot be done, because blue always takes white. And if you photograph a blue picture on a white back-ground, you obtain a black or opaque negative. Perhaps no expert photographer has made more experiments in this line than Wm. E. Bierstadt, and we are indebted to him for the practical solution of the problem. The principal object to be sought after is to cut off the reflection of the blue rays, and to do this a red screen of some kind must be used. If a thin red-tinted collodion film is laid over the surface of a blue