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THE REV. J. LAWSON SISSON'S RAPID DRY PROCESS.

SOME weeks ago we announced to our readers that the particulars of an extremely rapid dry process had been communicated to us by the Rev. J. Lawson Sisson, and that the only condition attached to the publication of all details was that we should first try it thoroughly ourselves. We have done so, with varying success as to results, but always with considerable rapidity as regards exposure. It has also been tried by several of our friends: the results we shall state in due course.

Before proceeding further we will give the details of the process, and for exactness we will first state them in Mr. Sisson's own words. The manipulations in this process are very similar to those recommended for the preparation of tannin plates. Mr. Sisson says:—

"I used Ponting's collodion, ordinary nitrate of silver bath, washed the plates in two or three baths of water, poured over carefully a small quantity of the liquid, and then raised up to dry in a warm room, just as in any other dry process."

The preservative solution is made as follows:—

"If you take one ounce of ordinary gum arabic and dissolve it in one ounce of water by gentle heat, and then by degrees add one ounce of water to it in which has been dissolved some common borax, biborate of soda, you will have a most remarkable mass, twice as large and twice as stiff as the first solution. This is, or ought to be a well-known fact. Now keep adding water in which has been dissolved as much borax as it will take up (it dissolves a very very small quantity) until the liquid is almost as thin as water; then add a small quantity of spirits of wine to the solution, which will no longer precipitate the gum as before, but absolutely rather thicken the solution, as careful experiment will show you."

The development Mr. Sisson states may be effected either with pyrogallic acid and silver, or iron and silver, the latter giving the most rapid results.

The general characteristics of the negatives obtained by Mr. Sisson were, as regard softness and delicacy, as nearly as possible similar to those obtained by wet collodion. The tone is very fine for transparencies, being of a rich warm brown black not requiring any toning. The plates have in Mr. Sisson's hands kept for months without deterioration, and the preservative solution was perfectly good at the end of twelve months. All the prints we have seen from Mr. Sisson's, vouch for the excellent character of the negatives.

In following out the above instructions for preparing the preservative for our own experiments, we made a solution which contained, when completed, six grains of picked gum arabic, from two to three grains of bi-borate of soda, and twenty minims of alcohol to each ounce of water.

We sensitized several stereo plates, in some of which a bromo-iodized collodion was used, and in others a simply iodized sodium collodion. On removal from the ordinary nitrate bath each plate was placed in a dish of distilled water, and remained there until another plate was prepared, when it was transferred to another dish of common water, and after remaining there until another plate was coated, was finally carefully washed with about a pint of common water poured from a jug. Sufficient of the preservative was now poured over the plate at one end, and suffered to flow off at the other; and then a second portion was poured on at that end, and after flowing over the plate, drained off at the opposite end. The plates were then reared up against the side of a large jug containing hot water and dried.

The plates were exposed within a few days, some in a moderate diffused light, others in weak sunshine for various periods from two seconds to ten; using a Dallmeyer's stereoscopic lens and three-eighths stop. Some were developed with a solution, containing fifteen grains of iron, and fifteen minims of acetic acid to an ounce of water, to which three or four drops of a twenty-grain silver solution were added; and others with a two-grain solution of pyrogallic acid. The results varied, the best negatives being those prepared with the simply iodized collodion, and developed with iron; a five seconds' exposure in a weak sunlight giving an excellent negative. Another plate, which received ten seconds' exposure in diffused light, developed with pyro gallic acid, yielded a similar picture. The negatives were clean, crisp, and vigorous, black in tone, and in all respects satisfactory.

So far the results were highly satisfactory and promising; but we are bound to add that in several other experiments we were not so entirely successful. Unless the utmost care was used in washing away all the free silver, a tendency to a red fogging was present, which we have noticed on other occasions in plates prepared with gum. In all cases, however, the results were superior in rapidity to most other dry processes, and very little inferior in sensitiveness to wet collodion. The development is almost as rapid as that of a wet plate, and we noticed no tendency to blisters, or danger of losing the film.

The reports of the gentlemen who have tried plates prepared with this preservative vary; but as in all the tendency to fog or stain in developing, unless great care had been used in preparing the plates to get rid of free nitrate, it is quite possible that the cause might be found in some peculiarity of the solution used, which was in all cases from the same bottle as that from which we ourselves found similar results. Some of our friends state that they found the plates not more rapid than those prepared by the Fothergill process, whilst others found less than half the exposure sufficient.

It was our intention to have submitted the process to further experiment before publication; but an unusual pressure of duties has prevented us, and as the season is rapidly advancing, we think it desirable that our experimental readers should have an opportunity of trying it before the summer is passed. In our hands it has justified our hopes of rapidity, and in the hands of the inventor, the Rev. J. Lawson Lisson, it appears to have yielded results of the utmost uniformity, both in rapidity and in the high quality of the pictures produced. To those of our readers, who may be anxious to try the process, we should recommend a little less gum and a little more borax in the solution, and the utmost possible care in washing before applying it. We shall be glad to learn the results in the hands of any of our readers.

MODES OF FIXING NEGATIVES.

SINCE the practice of using iron development for negatives has become general, especially amongst portraitists, whilst a higher class of pictures, softer, rounder, and more delicate has been produced, we have not unfrequently heard complaints of some little difficulty in obtaining sufficient brilliancy and vigour. As, under these circumstances, every minor addition to the printing value of a negative is of import-