

# THE PHOTOGRAPHIC NEWS.

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## PHOTOGRAPHY AND WOOD ENGRAVING.

It is a somewhat singular fact that, whilst any time during the last eight or ten years, discoveries have been constantly made whereby the problem of photographing on wood for the engraver has been solved, or stated to have been solved, each process proposed has remained, to all practical purposes, a complete dead letter. As early as 1854 to our recollection an engraving appeared in the *Art Journal*, photographed on wood and engraved by Mr. Langton of Manchester, who stated that he had then used the process for four years. By what method the photograph was effected, was not stated, but from some very sensible remarks on the conditions necessary, the use of a collodion film is suggested. The conditions are as follows:

1. The block must not be wetted, or it will cast, and the grain will open.
2. No material must be laid on the surface which will sink into the block and stain even the hundredth part of an inch below the surface, or else the engraver cannot see his cuts to any delicacy of detail.
3. Neither albumen, nor pitch, nor any brittle material, can be allowed upon the block, or else of course it will chip in the cross lines, or those close beside each other.
4. Whatever ground of any description is made use of must be so impalpably thin as to be really tantamount to the surface of the block itself, or else it cannot be equally cut through to any degree of certainty.
5. The block should be so prepared for the purpose of the photographer, that his collodion or other preparation may freely flow over it without sinking in, and that it may be easily cleared off in case of any failure in a first attempt, in order that another photograph may be put upon the same block without fresh dressing.
6. The positive must be either a *positive* upon a white ground, (or, the unaltered wood itself) or a *negative* upon a blackened surface.

Various attempts at intervals followed, and in the beginning of the year 1858 a process was patented by Mr. Newton, in which many of the conditions, particularly the saturation of the wood with varnish, appear similar to those detailed by Mr. Contençin in another column. During the same year an article appeared in the *Art Journal*, from the pen of Mr. Robert Hunt, in which similar conditions are again stated, and the thing as *un fait accompli* again announced.

Now, as the advantages of photographing direct on wood, so as to prepare the block for the engraver without the intervention of the draughtsman, must be obvious to every one, it is clear that some cogent reasons, or unstated difficulties have existed to prevent the thing coming into general use. These reasons, we apprehend, may be resolved into three classes; the *vis inertia* of the engravers, or the opposition of draughtsmen; the difficulty of rendering the various tones of the photograph by the conventional lines of the engraver; or, some inherent difficulty or unsuitableness in most of the methods proposed for producing the photograph on the surface of the block.

Regarding the first of these difficulties we apprehend that the enterprise of publishers would soon find means to overcome it, if the other obstacles ceased to exist. The second is more serious: it might be met, however, in the first place, by confining the work to the hands of the few capable engravers who can undertake such work, and in the next, by following out a suggestion by Mr. Hunt in the article referred to, namely, the education of a class of engravers who should be

taught to work directly from the photograph, translating its tones into the various effects possible in wood engraving. The third difficulty is manifestly overcome in the process of Mr. Bolton, in which the block appears quite free from any film of any kind, collodion, gelatine, albumen, or varnish. Mr. Bolton having spent much time upon working out his process and being an engraver by profession, is naturally indisposed to give away that, the beneficial use of which he can retain to himself in the exercise of his vocation. As, however, that which is beneficial to the individual in such cases, rarely tends to the advancement of the art, or to the advantage of the public, we propose briefly to call attention to a process to which, so far as we have had opportunity of observing, Mr. Bolton's very nearly approximates.

The process we refer to is that proposed by Mr. Crookes in 1858, and which seemed to have been singularly overlooked, perhaps the liberality with which it was given to the public having really tended to produce that effect. In that process, we believe all the conditions desirable are strictly fulfilled: the cohesion and texture of the wood are not in any degree affected, there is no film to interfere with the operation of the graver, or to become disintegrated in fine cross cuttings; the wood is not blackened below the surface; in short, the block is in all respects in the same state as when prepared by the draughtsman, the only conditions enforced on the engraver being his capability of translating tone into line, and that the block be cut in a subdued or artificial light.

The process, which will be found in detail in our first volume, p. 193, is very simple, and consists in rubbing over the surface of the block a little oxalate of silver moistened with water. The block is then exposed under a negative to direct sunlight, and a print is obtained in the usual manner. No fixing is required, darkening only taking place very slowly, ordinary diffused daylight having but little action on the coating of oxalate of silver.

In all cases of this kind, it is of little purpose to say that such and such processes "probably might answer." It is the fact of having been successfully practised which gives value to the formulæ. The process of Mr. Contençin has, we understand, been practically tested, and considerable interest would have been added to his paper the other evening if he could have shown some specimens of the results. Mr. Bolton's process has been eminently successful, as the engravings in the *Lyra Germanica* attest. But in no instance can a more completely practical and satisfactory illustration be given, than is found in the engraving of the "stereomonoscope" given on page 26 of our first volume, the block for which was photographed by his own process by Mr. Crookes, and engraved by Mr. Pearson, of Bolt Court.

## PHOTOGRAPHIC CHEMICALS:

### THEIR MANUFACTURE, ADULTERATIONS, AND ANALYSIS.

NEXT in importance to nitrate of silver stand *iodine* and the various *iodides*. Iodine, as being the body from which the various metallic iodides are prepared, will be described first, although for various reasons we shall not devote so much space to it as we did to nitrate of silver.

Iodine, from the Greek *ἰός*, the violet, owing to the exquisitely beautiful colour of its vapour, is found principally in combination with magnesium, sodium, or calcium, in various mineral springs and in sea-water. It is obtained in