

By Mr. Forrest.

1. Specimens of a  $2\frac{1}{2}$ -inch globe-lens for photographic purposes, invented by Harrison of New York. The glass covers a flat field of 60 degrees.
2. Two pictures taken by Harrison's new globe lens above described.

During a conversation arising out of the exhibition of the lens, Mr. Forrest undertook to read before the Society a statement of the grounds on which he claimed for Liverpool the priority, in England, in the art of photographing the moon and other celestial bodies by their own light.

The Rev. A. Hume, D.C.L. &c., Hon. Secretary, called attention to a proposal to raise, near the spot, a memorial of the execution of James, seventh Earl of Derby, at Bolton, in 1651.

The following paper was read :—

WHAT IS THE PHOTOGRAPHIC IMAGE? *by Mr. J. H. Glover.*

The author, after stating the various theories proposed from time to time, based respectively on chemical and electrical agency, and the experiments recently made by himself in elucidation of the question, summed up the result of his enquiries in the following terms :—

The action of light is first chemical, disturbing a portion of the iodine or bromine, which is not actually separated until brought in contact with some combining substance in the developing fluid, producing an image of *subiodide of silver*. This substance possesses an electrical affinity for the particles of metallic silver, as reduced from its solution by the subsequent *intensifier*.

The question naturally arises—how do you account for the action of the old developers which contain no recognized substance capable of combining with the suspended iodine? The answer is simple enough. When a solution of pyrogalic acid and silver is applied to a sensitive plate which has been exposed to light, the action of the developer is reversed. The pyrogalic acid having no affinity for iodine, has first to reduce a portion of metallic silver from its solution. We have then all the conditions for the formation of the image. The metallic silver has a strong affinity for the iodine, subiodide is formed, reduction of the nitrate progresses, and intensification is the consequence.

Again, the proto-sulphate of iron developer is more rapid in its result than the pyrogalic acid. The reason is obvious. The salt of iron is the more energetic reducing agent, and the metallic particles consist of pure silver, which is not the case from pyrogalic acid, they being more or less associated with organic matter. In the iron development then, we have closer contact of the combining substances, consequently greater rapidity of action.

While on this subject we ought not to overlook the beautiful images produced by the now neglected, because evanescent, Daguerreotype process, the pioneer of all photography.

The foundation of the image consists of a surface of highly polished silver, having a delicate superstratum of sensitive iodide of the same metal.

The action of light is precisely the same as upon the collodion film, but in this instance we have an absorbent of the liberated iodine in the metallic substratum, so that the plate itself possesses all the elements of chemical action, and in consequence the subsequent electrical affinity for the condensed mercurial vapours which form the visible image.

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7th May, 1863. ARCHÆOLOGICAL SECTION.

JOSEPH MAYER, Esq., F.S.A., V.P., in the Chair.

Mr. Edward B. Bright, 2, Exchange buildings, was duly elected an ordinary member of the Society.

The following donations were presented :—

- From the Royal Geographical Society.  
Proceedings, vol. VII, No. 2.
- From the Numismatic Society.  
The Numismatic Chronicle, N.S., No. 9.
- From the Architectural and Archæological Society of the County of Buckingham.  
Records of Buckinghamshire, vol. II, No. 8.
- From the Kilkenny and S. E. of Ireland Archæological Society.  
Proceedings and papers, N.S., No. 38.
- From the Sussex Archæological Society.  
Sussex Archæological Collections, vol. XIV.
- From the Manchester Literary and Philosophical Society.  
Proceedings, April to June, 1860.
- From C. Roach Smith, F.S.A.
  1. On an unpublished coin of Carausius and two of Allectus ; by Churchill Babington.
  2. Florin d'or de Tecklenbourg.
  3. Trois Bulles d'or des Empereurs belges de Constantinople.
- From Mr. H. S. Fisher.  
Naturalists' Scrap Book, part 1.
- From M. de Perthes.  
L'Abbeillois, French Newspaper for the 18th of April, 1863.
- From the Proprietors, through Mr. T. Reay.  
The *Liverpool Compass*, a Literary and Scientific Journal, Nos. 1 to 9.
- From Mr. T. Dawson.  
A copy of a reprint of Mr. John Eyes's Map of Liverpool, 1765, with the addition of the names of the principal contemporary land owners.

The following objects of interest were exhibited :—

By Mr. T. Dawson.

1. Liverpool editions of Everard's Book-keeping, 1764, and the History of Colonel Jaque, 1784.