

box, which was placed in a perfectly dark room. The images sometimes appeared after the action had lasted ten minutes.

"Mr. Moser has endeavored to find out, whether phosphorescence was in any way the cause of this phenomenon; but he has not been able to detect any difference between the action of a body left, during several days, in complete darkness, and that which had just been exposed to the action of the solar rays. This result was very satisfactory in an experiment with an agate plate, which was exposed in the sun, having half of its surface protected from the solar rays. It was impossible to distinguish any difference in the image obtained by means of this agate, on a polished silver plate between the part exposed, and that which had remained covered.

"The mercurial vapors are not essential to render manifest these phenomena: thus, an iodized silver plate being subjected in complete darkness to the action of a body placed over it at a small distance, during a sufficient time the image appears; and the parts which have been most acted upon, are blackened considerably.

"The only manner of explaining the formation of distinct images in these cases, if it be attributed to radiations, is evidently to admit, that these radiations diminish very rapidly in intensity, in the ratio of their obliquity, and this is what Mr. Moser himself admits.

M. de Humboldt announces in his letter, that Mr. Moser's experiments on the formation of images in darkness, by means of contact and the placing at small distances, have been repeated with full success at Berlin, by Mr. Aschersohn in his presence, and is that of Mr. Encke, the Astronomer.

"An ornamental engraved plate was placed upon a highly polished silver plate, which had not been iodized, and left during the space of twenty minutes; the image was but indistinctly represented on the plate, but became more perfect by iodizing the plate, and afterwards subjected it to

the mercury. In another experiment, a cornelian cameo, bearing an inscription, was placed over the polished silver plate, and the letters were perfectly legible thereon.

"Mr. Aschersohn has obtained very distinct traces of images, by placing the engraved metal plate at the distance of about one-third of a line from the silver plates."

Mr. Moser thus resumes his researches on the subject:

"1. Light acts upon all bodies, and upon all in the same manner; the various actions of light hitherto known, are only particular illustrations of this general fact.

"2. The action of light exhibits itself in modifying bodies in such a manner, that, after having experienced this action, they condense the various vapors, otherwise than they would do without it. Mr. Daguerre's discovery rests upon that proposition, and presents one illustration of that general action.

"3. The vapors are condensed more or less by the substances thus modified, according to their elasticity, and to the intensity of the luminous action.

"4. It is known that the iodine of silver begins by blackening under the influence of light.

"5. If the action of the light be prolonged, the iodide becomes transformed into colored iodide.

"6. The differently refrangible rays have one simple and identical action, and there exists no difference between them; but in the time which they take to produce a determined effect.

"The blue and violet rays, and the dark rays, discovered by Ritter, commence rapidly the action upon the iodide of silver: the other rays, to produce the same effect, require a longer time in proportion to their refrangibility.

"8. However, the action (5.) is more rapidly begun, and effected by the red and yellow rays: the other rays employ so much the more time in proportion as they have a greater degree of refrangibility.