

of the first and second coatings, and in that state entirely affected by daylight, then exposed only on one vertical half during a few minutes under a red glass, so that the action of the red glass exercised only on one half of each zone of the various tints of the two coatings, the mercurial vapor affects the surface in such a manner as to show that the red glass has destroyed the action of daylight on the various coatings of iodine, and has continued the same action on the first. The red glass has brought back the half of the more sensitive coating to the same degree of effect produced on the less sensitive, which has not received the action of the red glass. It has therefore destroyed the action of daylight on the more sensitive coating, and has continued the effect commenced on the less sensitive coating, to the same degree of intensity as the part of the more sensitive coating which has not received the action of red glass; so that each half of the plate has an effect perfectly equal and identical, in every point, to that of the other half, but in an inverted manner. A remarkable result is that the horizontal zone, which is precisely in the middle of the plate, has the same intensity of photogenic effect in all its length. This proves that there has been neither distinction nor continuation on the spaces where the coating by its thickness had the mean state of sensitiveness.

In putting aside the question of the influence of the various periods of the year on the destruction or continuation of the effect of daylight by the red and yellow rays, until we have been able to verify the exactness of the facts mentioned by Dr. Draper, it is not possible to say in a general way that the red and yellow glasses are endowed with the property of continuing the effect of daylight on iodide of silver; for I have just proved that there are cases in which the contrary always takes place, according to the thickness of the coating of iodine. Since the vapors of the atmosphere as well as the colored glasses render the

action of light negative, in absorbing certain rays and allowing certain others to pass, it would not be surprising that, from the simultaneous action of the vapors of the atmosphere and of the colored glasses, some contradictory effects might result; that when light has to pass two different kinds of absorbing media, a certain effect could be produced; and that when the atmosphere is pure and free from all kinds of vapor, the absorption of colored glass only might produce an effect of quite an opposite nature.

According to the position and density of the vapors of the atmosphere, all the points of the luminous space are not endowed with the same photogenic properties, so that in some circumstances a plate, first exposed to the blue light of the zenith, loses the property of receiving the mercurial vapor, if it be exposed a second time to the horizontal light of the south, when there exist some vapors, although not sufficiently dense to render the sun decidedly yellow. I have obtained specimens in which this curious result is manifest. One of them exhibits a negative image. This effect was produced by exposing a plate, first to the blue light of the zenith, and afterwards, covered with an engraving or a piece of black lace, to the light of the south.

The possible simultaneous existence of two antagonistic lights reflected from the atmosphere explains those anomalies which are so annoying to photographers; for example, those circumstances under which it seems impossible to obtain any image whatever may be the length of exposure in the camera. This difficulty is important to the preparation of the plates, the state of the accelerating solutions, &c.; and after all it only exists in the light. As much effect is often obtained in 30 seconds as in 120 seconds, for it is possible to have obtained a first effect which has been afterwards destroyed; and that must inevitably be the case if, during the latter part of the exposure in the camera obscura, any cloud