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PHOTOGRAPHY IN AND OUT OF THE STUDIO.

IS JUPITER SELF-LUMINOUS—WANT OF SHARPNESS IN ALKALINE DEVELOPED PLATES—THE MODIFIED WOODBURY PROCESS—INSTANTANEOUS SHUTTERS.

Is Jupiter Self-Luminous?—At the last meeting of the Royal Astronomical Society a paper by Dr. Henry Draper, of New York, was read, in which a claim was made that Jupiter is self-luminous, owing to the fact that a portion of the spectrum as photographed appeared darker in one region than did a photograph of the lunar spectrum which was placed in juxta-position. Well, we have a great idea of the capabilities of photography, but it is very hard that it should be made accountable for every defect that may be due to bad focussing or a faulty manipulation. What the phenomena was due to we cannot say, but as it has only been observed on one occasion, we can hardly suppose that just as this particular photograph was taken the planet kindly began to warm up, and subsequently revolved again. Dr. Henry Draper should tackle the question again, and see if by any possibility the same phenomenon is recorded a second or a third time, and then we shall be more inclined to take the evidence into consideration.

Want of Sharpness in Alkaline Developed Plates.—Talking of Jupiter, this naturally reminds one of the excellent photographs taken by Mr. Common, with his large reflector of that planet. We believe that after many trials Mr. Common has finally abandoned gelatine plates, as wanting in definition. This is a serious charge to make against a process, but, as was pointed out in the Photographic Journal by Capt. Abney, there is a want of definition in some cases. We have also heard that at Greenwich the same charge is brought against it, and that the old iodized collodion and pyrogallic development are considered to give better results than any other. Mr. De la Rue, we hear, still gives the preference to that process for his lunar pictures, and certainly some lunar photographs which have been developed by iron leave very much to be desired. When enlarged with the old iodide process, the enlargements only suffer from the want of accurate optical focussing, and not from irregularities in the deposit. It appears that with the alkaline developer there must always be a tendency for a lateral spread. The very nature of the action would lead to that conclusion, and we doubt if for microscopic work any process which depends on it will be able to compete with that in which the developing action takes place by deposition. We recollect well a trouble that occurred to us in photographing a scale of small dimensions; it seemed almost impossible to get defined lines on emulsion plates, owing to the spreading out of the opaque portions. The difficulty at once vanished when we used the ordinary wet process. There is a good deal of talk about bundling the bath out of the dark room now-a-days, in favour of gelatine emulsion. We do not think the time has come as yet, however, to do so, on more accounts than one; we believe that what has been called the faithful old servant, the wet process, has still a good many years of life in it, and that, like a well-known personage, it will always be retained in the establishment of any serious photographer.

The Modified Woodbury Process.—In our last number but one we mentioned that Mr. Woodbury was about to read an important paper to the French Photographic Society, but we did not feel at liberty to mention the subject on which he was to enlighten that most august and select body. The murder is out. It is on a modified process of which Mr. Woodbury himself was the discoverer. It will be in the recollection of all who have studied the question that in order to make a mould from which to produce the woodburytype pictures it was necessary to use an hydraulic press, to press the gelatine picture into soft metal. As far as we can understand, the present modification is to produce the mould by covering the gelatine picture over with tin-foil, and then to electrotype in copper over this. We believe that the success attaching to the modification has cost Mr. Woodbury much anxious study, and, judging from our own experiments on electrotyping on foil, the difficulty he has had to surmount was not a small one. It seems to us, as we ourselves suggested previously, and which, we believe, has been practically found by Mr. Warnerke, that Spence's metal will give as good a mould as the more elaborate system divised by Mr. Woodbury. The manipulation of Spence's metal is delightfully simple, if ordinary precautions are taken, and a mould may be cast in a very short space of time after the gelatine relief has been made. If there be any objection to Spence's metal, it is its extreme brittleness. A very slight tap with a hammer will break through a large block, though its tenacity is very great; it thus seems that it is better adapted for woodburytype, in which the pressure put upon it is gentle, than for typographical processes, where it frequently happens that a blow might be brought upon it. A rolling pressure, such as in automatic printing presses of some description, would inevitably break it.

Instantaneous Shutters.—The last meeting of the Photographic Society was one of great interest to all interested in gelatine, since, amongst other things, it brought to the front many novel devices for instantaneous shutters. As pointed out by Mr. Dallmeyer, however, the thing wanting is something which shall have the whole aperture of the lens to do its work during the whole time, and not a something which acts as a diaphragm to the lens. Without exception, we believe all the shutters shown did act as diaphragms, and it appears to us that the only shutter which can really be perfect is Mr. England's old pattern, which falls just in front of the plate. In this the whole lens does its work during the whole time, the shutter merely acting as a drop to cut off from exposure different portions of the plate. Mr. Warnerke made a very salient remark, however, that this kind of shutter was apt to give greater distortion to moving figures; these would be formed when the shutter was placed close to the lens. In the one case the feet of a man might be exposed for a brief interval, and the head for a different interval after the exposure for the feet was finished. This would mean that the feet of the man would be much further off from the head than it would be if the both feet and head partook of the exposure together, for a longer time, perhaps, but with a weaker light. In the two cases we have to cast a balance between sharpness and generally fuzziness of the image. The latter would be incorrect for the reason above stated, whilst the other would be more life-like, but less satisfactory to the eye. Probably it will be found that a mean position of the shutter will give optically the most satisfactory results. There can be no doubt also that an instantaneous shutter, to be perfect, should be capable of giving any exposure from a couple of seconds to (say) one-fiftieth of a second, and this can only be secured by one of two ways: either by adopting a drop shutter and regulating the velocity of its fall and its aperture, or by some electrical and prismatic arrangement, as in the shutter shown by Lieut. Darwin. Anything over two seconds may be conveniently timed by a flap shutter such as Cadett's, or by uncapping the lens in the usual manner. It is, perhaps, a misnomer to call a couple of seconds an instantaneous exposure; all we mean to insist upon is that the shutter should be capable of giving this exposure, or one very much smaller. Mr. Robinson, in last week's Topics of the Day, has pointed out that breaking waves and such objects can readily be depicted without any departure from the truth by the quick uncapping of the lens by hand, and no doubt there is great truth in the assertion; but at the same time we do not doubt that he would be the first to admit that one-tenth of a second is better than half a second when there is much movement as is to be found in street views. We have heard it remarked that a very short exposure, such as one-fiftieth of a second, would record results which to the eye would seem untruthful, and we believe this to be the case in many instances. In Muybridge's galloping horses, for example, no eye has ever been able to