

photograph was looked for from this instrument, one which would be exposed from the beginning until the end of totality.

The prismatic camera, the instrument on the model of that used first in the eclipse of 1875, in which the corona forms its own slit, for some reason or other, does not appear to have been so successful in this eclipse, although it was tolerably so in that of last year.

The attempt which has been least successful is that in which Professor Rowland's grating was used as a prismatic camera, similar to that to which we have just referred. It was hoped to obtain a photograph of the blue end, both in the first and in the second order spectrum, but the results obtained are ciphered as bad. Seeing that Dr. Janssen was successful in his attempt to obtain large-scale photographs of the corona, we need not regret so much that our attempt to photograph it on a scale of four inches to the sun's diameter was unsuccessful.

The small photo-heliograph that was employed to such good purpose in Egypt last year, has again given excellent results, which will be of the highest importance, as they will have been carefully executed, and the American party have taken no photographs themselves on the present occasion.

The English observers telegraph that the lines obtained in the spectrum of the corona by these various methods are chiefly those of hydrogen. This, of course, does not apply to the flash we have spoken of. They add that the prominences were almost absent. This is an extremely important fact, because it shows what entire justification there was for the prediction made for the present eclipse after that of 1878, observed in the United States. That eclipse occurred at a *minimum* sun-spot period, and the hydrogen lines were then seen only with difficulty, while the continuous spectrum of the corona was more or less brilliant. In the present eclipse the hydrogen lines were well seen with a very brilliant corona, as was anticipated would be the case at a period of sun-spot *maximum*. This, perhaps, may explain the apparent absence of the prominences, because practically the lower part of the corona was itself made up of them.

We have not, of course, any detailed information with regard to the results achieved by the other parties, but when our own two English observers have obtained such a rich harvest we are justified in concluding that the work of the American and French parties has been equally fruitful. In that case, the trouble which has been taken to secure the observation of this eclipse, which took place at a greater distance from home than any previously observed, will have been entirely justified.

As we have said, the results of the other parties will take some time to reach us, but at least we may be sure of this—that the Americans, with their large experience of eclipses and their trained observers, will have much that is new and important to add to the results which our own English party has achieved.

### Review.

DAS LICHT IM DIENSTE WISSENSCHAFTLICHER FORSCHUNG. Handbuch der Anwendung des Lichtes und der Photographie in der Natur- und Heilkunde, &c. By Dr. Stein, of Frankfurt. (Leipzig: Otto Spamer).

"LIGHT in the service of scientific investigation," is the well chosen title of a work which, whilst it includes photography, and, indeed, has the greater portion of its pages devoted to photographic processes and applications, has a far wider scope, and treats of subjects well calculated to excite the interest and attention of those—and we believe their number is not few amongst photographers—who find pleasure in following the results of scientific research so far as they are made clearly intelligible.

A point worthy of particular recognition in the volume before us, is the manner in which the various printing-ink photographic processes are illustrated by specimens. Examples of the high-relief engraving processes of Poitevin and Baldus are set up with the type, and the beauty of the result, especially in a copy by the Poitevin method, of a pen-and-ink drawing, is so striking, that one can only wonder that these processes have not been more generally adopted. An engraving after Albert Dürer, transferred to the wood-block by Leth's method, the formula for which is given,

merits the attention of those who are interested in photography upon the wood block, although, in this case, the perfection of the final result, of course, depends upon the skilled hand of the engraver, who follows with his tool the lines placed by photography upon the box-wood.

Among the illustrations which cannot be set up with the letter-press, and of which there is a collection of separate plates, are those by collotype, photo-lithography, and indented line (resembling copperplate). An example of the latter, as a copy of an engraving, seems to be as near perfection as possible. One of the collotype prints is a representation of the work rooms of Herr Albert, at Munich, and is the same that was presented with the PHOTOGRAPHIC NEWS No. 616, June 24th, 1870. When we visited the establishment of Herr Albert in 1877 some changes had been introduced into the building, on the doors of which the label "Verbotener Eingang" showed us that we were especially privileged. Steam presses had been brought to bear, and we saw an order for seven thousand prints executed at the rate of a thousand a day, and this without interfering with the work which was going at the hand-presses, these being reserved for work in which the highest quality, rather than speed of production, was aimed at. A description of this pioneer collotype establishment we will find in Mr. H. Baden Pritchard's "Studios of Europe." Other specimens of collotype processes are plates illustrating physiological subjects, by Brauneck and Maier, of Mayence, and an astronomical plate, forming the frontispiece, by Strumper of Hamburg. Both of these are exceedingly fine.

The application of photography to physiological and general scientific investigation forms a very noteworthy portion of the work. There is a full description, made clearer by wood-cuts, showing the instrument employed, and the results obtained, when photographing the waves caused by sound, with the character of which our readers will be tolerably familiar. Sphygmographic curves are also described, as well as the manner of applying the sphygmograph to the pulse, lungs, and heart.

A special chapter is devoted to instruments for examining the ear, eye, and throat, and the manner of using photography in connection with these appliances is also shown; but it is, of course, impossible, in a short notice, to even refer to all the points of interest in a carefully got-up work of nearly four hundred pages, and we lay down the volume, warmly recommending it to our readers.

### FRENCH CORRESPONDENCE.

TINTED AND QUADRILLE PAPERS—NON-FIXING OF GELATINE PLATES—M. LISBONNE'S EMULSION.

*Application of Tinted and Quadrillé Papers.*—*Quadrillé* (cross-lined writing paper) and tinted papers are employed with great success by all those who have to do with phototypographic reproduction, and transforming ordinary photographic prints into typographic negatives, as Ives, Petit, Meisenbach, &c. As to Gillot, Angerer and Göschl, &c., they use these papers for original designs to be reproduced by typographic engraving. For my own part, I advise the use of a phototypic tracing on white *quadrillé* paper, so that the artist may have the shading and outline both under his eyes at the same time. A special pencil has then only to be employed to give vigour. This suggestion is the object of a special work of mine to appear soon, entitled "Manuel de dessin à la plume et au crayon en vue de la transformation immédiate en cliché typographique," and will be published by Gauthier-Villars.

*Non-Fixing for Gelatine Plates.*—M. Davanne has been following M. de la Ferronnays' formula for fixing for the purpose of its practical verification. A gelatino-bromide plate has been left for forty-eight hours in a hypo bath saturated with bromide of silver, alum, &c., and after its immersion it was as rich in bromide of silver as before. The duration of the fixing action is limited by its saturation.