

and contains information upon all sorts of subjects, from a list of abbreviations usually employed in writing, to a description of the rare metal zirconium. Between these two articles we find notices of the methods of brewing, and the proper way of laying bricks and ventilating houses, the nature and treatment of broken wind in horses, the composition of digestive, aperient, and tonic pills, the practice of photography, the nature of infective diseases in man and beast, the destruction of caterpillars in plants, the best kind of clothes to wear, and the method of taking grease spots out of clothing. From these samples of the contents it will be seen that the book is really a most extraordinary work of reference and one which is not likely to lie idle on the shelves, but to be more or less in constant use. The work of revision has evidently been carefully done, and must have been one of no small labour, as it has been brought well up to date and many articles must be entirely new. The great practical utility of the work is shown by the large circulation it has enjoyed for many years, and the editor has done his best to maintain the well-deserved reputation of the book.

*Traité Encyclopédique de Photographie.* First Supplement A. Par Charles Fabre. (Gauthier-Villars et Fils, 1892.)

MANY of our readers are already thoroughly acquainted with this excellent treatise which we owe to M. Fabre. In the present volume we have the first of the series of supplements which will be issued in order to keep the book well up to date. The range of progress here shown is that accomplished during the years 1889-92. The same arrangement as to numbering the paragraphs is still presented, so that it will be quite easy for those having the original volumes to refer to any section in this supplement.

The matter which is chiefly treated of here refers to the various properties and kinds of lenses and to their combinations: thus some of the most important headings that have been considerably developed may be stated as follows:—Methods of measuring focal distances, Martin's objectives, simple objectives, calculation of objectives, rapid eyescopes, Zeiss' objectives, &c. Many other new discoveries, such as Lippmann's photography in colours, have also received attention.

With these supplements this encyclopedia will be found to be greatly enhanced in value, for at the present day photography is undergoing many and rapid changes the recording of which in this form is no light task.

#### LETTERS TO THE EDITOR.

[The Editor does not hold himself responsible for opinions expressed by his correspondents. Neither can he undertake to return, or to correspond with the writers of, rejected manuscripts intended for this or any other part of NATURE. No notice is taken of anonymous communications.]

##### The Mustakh Exploration.

MR. CONWAY'S march from our newly acquired district of Hunza into Baltistan (reported in the *Times*), up the Hisper glacier on one side and down the Biafo on the other to Askolay, is a splendid feat to have accomplished, a memorable achievement, and his account of it will be something to look forward to on his return to England. The total length of these two glaciers is certainly something between sixty and seventy miles measured upon the map, and over this distance the glacial forces in action are on the grandest scale. The view obtained of the Hisper glacier from the two points we ascended on either side of the Nushik La is hardly to be described, from thence the end of the Hisper glacier is not defined, and could only be indicated from the run of the spurs on the north side of the valley, and what information the guides could give. This made the total length sixty-four miles. By traversing this length of the two glaciers Mr. Conway has been able to get into ground

never before visited, viz., that great ice field on the main range of the Mustakh, the full extent of which is quite unknown, and from which the Nobundi Sobundi branch of the Panmah glaciers also descends. Most interesting will it be to read the account of this glacial area from the pen of a man who knows the Alps so well, and has ascended so many of its peaks. He has gone direct and fresh from the one to the other—what an exquisite treat—and he has now seen glacial action on the vastest scale it is presented at the present time in a mountain chain out of Polar latitudes. My experience was the reverse of this, for I had not the opportunity of seeing an Alpine glacier until twenty years after I had been surveying those on the Yarkund and Hunza frontiers, and in the interval the vividness of their aspects and minor details had much faded. It is to be hoped that Mr. Conway has with him, and used, a plane table, properly projected on the four miles to the inch scale, with all the peaks fixed by the Trigonometrical Survey of India, correctly plotted on it, and will thus be enabled to add to and correct much of the previous reconnaissance work. There is no doubt, had Capt. Younghusband, who was another late explorer in this part of the world, worked with a plane table along his line of route towards Hunza, the results of his exploration would have been of tenfold value, and far more extended. The Indian Government should make it a rule that all officers permitted or selected to explore the unsurveyed territory beyond our Indian frontier, should, as a preliminary training, do a season's work plane-tableing with a Himalayan survey party. It would also be an admirable training for officers selected for the Quartermaster-General's and Intelligence Departments.

H. H. GODWIN-AUSTEN.

#### Nebular Spectrum of Nova Aurigæ.

NOVA AURIGÆ faded away so steadily in March and April as to give little promise of soon again attaining any considerable brightness. All the more startling, therefore, was Mr. Espin's announcement of Mr. Corder's discovery that it had reappeared and that he himself on August 21 had seen it as a star of the 9.2 magnitude with a monochromatic spectrum, presumably about 500 mmm. in wave-length.

Fortunately the 15-inch refractor of this Observatory is still in working order, and still more fortunately my old colleague in the observation of Nova Cygni, Mr. J. G. Lohse, is staying here. On August 25 and 26 we were able to examine the Nova with a compound prism in the Grubb stellar spectroscope. The spectrum thus seen evidently contained two bright lines, the positions of which we determined as follows:—

Date.	Chief Line: Brightness 5 to 10.			Observer.
	Wave-length.	Measures.		
Aug. 25	... 500.4	... 4	...	R. C.
26	... 500.4	... 3	...	"
25	... 500.5	... 3	...	J. G. L.
26	... 499.9	... 5	...	"

Date.	Second Line: Brightness 1.			Observer.
	Wave-length.	Measures.		
Aug. 25	... 495.3	... 2	...	R. C.
26	... 494.6	... 3	...	"
25	... 495.9	... 3	...	J. G. L.
26	... 495.4	... 5	...	"

From these we may derive the mean values of 500.3 and 495.3, which prove, as we think beyond doubt, that Nova Aurigæ is now mainly shining as a luminous gas nebula.

Once or twice on the 25th August, at the best moments, I had noticed feeble traces of a condensed luminosity in the spectroscope, far away on the side of less refrangibility. Our time, however, was fully occupied in observing the two brighter lines and the zinc-lead spectrum, with which we compared them, until daylight prevented further observation. On the 26th, haze and bad definition concealed everything but the chief lines, but on the very clear night of the 28th, continuing the observations alone, I examined the star with a power of 229 on the wire micrometer, and wishing to see if the spectrum had materially altered I viewed the star through an excellent direct-vision prism. In this way I at once saw a faint continuous spectrum in the green, together with a distinct line in the yellow. With the spectroscope the line was also readily perceived, but not having prepared the battery for the illuminations and comparisons, no reliable direct measures could be made. By introducing