

of paper are pasted to the face of the picture, and when these are dry, the canvas is rubbed away, leaving the painting attached to the paper. A new canvas is then applied to the back, after which the paper is removed by moisture, and the picture rests safely on a new canvas. In regard to the safety of the transfer, much, of course, will depend on the judicious choice of a transferring medium and on skilful manipulation. Here, also, time will determine much more satisfactorily than conjecture.

The method of carbon printing on canvas, described by M. Despaquis (see our last Volume, p. 328), should not be lost sight of. Employing gelatine and bichromate as the sensitive agents, he first prepares fine linen or calico with some varnish, Burgundy pitch dissolved in alcohol being recommended. This gives body to the canvas, and fills up the interstices, at the same time rendering it somewhat transparent. After coating with the sensitive carbon compound, it is exposed, with the uncoated side in contact with the negative, so that when the unaltered material is afterwards removed, an image, with due gradation of half-tone, is produced on the canvas. The amount of grain which would be produced by the light passing through the linen would not be injurious. Possibly an adaptation of the same idea, using the prepared linen and exposing from the back with the printing-ink process, might be found to answer without transfer. We commend the matter to the attention of Mr. Lucas, if he be experimenting in this direction.

Critical Notices.

A DICTIONARY OF PHOTOGRAPHY, edited by THOMAS SUTTON, B.A., and GEORGE DAWSON, M.A. (London: Sampson Low, Son, and Marston.)

THIS is a second edition, somewhat reduced in size, of a work published about nine years ago. The convenience of the dictionary form for a work of scientific reference is very obvious, as affording ready facilities for consultation by readers, and permitting to the writer a brief condensed style of treatment to each subject, not admissible in a work in which continuous interest must be maintained in the different parts of the subject. The difficulties attending such a work chiefly rest in the danger of losing completeness in aiming at condensation, and in the introduction of irrelevant matter in aiming at comprehensiveness.

In the book before us the optical portion is relatively the largest part of the work, and is, where the statements of facts are not tinged by the strong prejudices of the writer, very well done, affording much useful information. Much of the miscellaneous photographic matter is also clearly and tersely written.

We cannot say, however, that the book is free from grave faults, not only in the introduction or retention of obsolete or irrelevant matter, but also in erroneous and misleading information. The first sentence upon which our eye accidentally rested, on casually opening the volume, is an example of error:—

ALABASTRINE POSITIVES.—This is a term applied to collodion positives, in which the film, after being coloured with dry pigments, is rendered permeable to varnish, and thus shows the colour in the collodion itself. There have been many methods described by which this can be effected, and some of the results are very beautiful, but the process is now little practised, chiefly, perhaps, because it entails a deal of trouble.

Now, there is not one word in this definition which really describes an alabastrine positive, nor has colouring any necessary connection with the matter. An alabastrine positive is a collodion positive which has been treated with a solution which bleaches the lights to a very pure white, resembling alabaster in colour and texture. Such positives were frequently, but not necessarily, coloured in the manner described; but the name was due solely to the purity of the whites, and was applied, whether the pictures were coloured

or not. Insufficiency of definition also occurs. To give as the description of a *carte-de-visite*, "an absurd name given to a small portrait," is not to define it. The question of opinion as to the absurdity of the name we need not discuss; but to define the thing, the kind of "small portrait" should have been described. The retention of an obsolete paragraph like the following is evidently an oversight:—

HUNGARIAN SOLUTION.—This liquid is sometimes used in the Daguerreotype process for exciting the plate at one operation. Its composition has not been published, but it is supposed to be a dilute alcoholic solution of iodine, bromine, and chlorine in certain proportions. Its use is now nearly superseded by that of bromide of lime.

Seeing that the use of Daguerreotypes has been generally superseded for the last ten years at least, and that it is very long since a single photographer practised the Daguerreotype process in England or elsewhere, it is quite certain that the Hungarian liquid is more than "nearly superseded." The paragraph of course belongs to the old edition, its removal having been neglected. The retention of unnecessary matter is the more to be regretted since it renders necessary the omission of valuable matter on points to which photographers will naturally here refer for information. For instance, we refer to "Sulpho-cyanides," which, as proposed new fixing agents, have excited much interest during the last two or three years. We find the subject treated in just seven lines, which mention that they have been proposed for fixing, but that their superiority over hyposulphite of soda is "very doubtful." Under "Potassium," we find about the same amount of information to the same effect. Under "Ammonium," about the same space is devoted to the subject, but the sulphocyanide is described as safer than hypo, but more expensive. In no case is there any information as to the difference in their mode of action and that of hypo; nor in what their alleged superiority, on the one hand, or the reason for doubting it, on the other, consists. We should not complain of the absence of information of this kind in a work necessarily limited and concise, were it not that much space is taken up with subjects really unconnected with the art. A knowledge of the composition of sealing-wax is doubtless interesting; but it was not necessary to devote half a page of a dictionary of photography to the subject, when more important matter was left out.

We have no wish to multiply examples of this kind, nor to dwell on minor errors—such as the attributing the resin process, introduced by the Abbé Despratz, to the Abbé Pugo—of which there are several. We refer to the presence of these defects chiefly to point out the importance of a vigorous revision, should a new edition be called for. As it stands, it will be a useful work of reference on many points of the art which will be convenient to the student in photography.

AN INTRODUCTION TO CHEMICAL PHILOSOPHY, according to Modern Theories. By Dr. ADOLPHE C. WURTZ, F.R.S. Translated, by Permission of the Author, by W. CROOKES F.R.S. (London: J. H. Dutton, Wine Office Court).

THE science of chemistry, as is well known to most of our readers, has of late years been undergoing an important transformation, not only in notation and nomenclature, but also in the recognition of higher philosophical principles. The aim of this valuable little volume is to initiate the student into the chemical science as developed by its latest authorities. Of the completeness and orderliness of the work, and the lucidity and excellence of the style, we will permit Mr. Crookes to speak, who has thought it worthy of introduction to English readers. We quote his introductory remarks:—

At a time when the philosophy of chemistry is becoming more and more clearly apprehended, we need to be reminded of its historical development. The more acute and profound our co-ordination and interpretation of phenomena, the more careful should be our scrutiny of the successive views regarding them which have