

On the economic sheet of the folio structural contours at intervals of 100 feet are represented by white lines. These, as drawn, represent the inequalities of the upper surface of the principal coal bed in the Upshur sandstone. The thickness of the strata being known, it is evident that the position of any other coal seam or bed may be determined from this datum plain.

*Laboratory Manual of Inorganic Chemistry.* By RUFUS P. WILLIAMS, in charge of the Chemical Department of the English High School, Boston. Boston, Ginn & Co. 1896.

This book, which is intended especially for use in elementary schools, is arranged so that each page is devoted to a separate topic. The alternate pages are left blank for notes and the experiments are unusually full of minute directions. This minuteness of directions may be well in the case of one who is working alone and can use the book to aid him in difficulties; but when working under the eye of the instructor it is questionable whether such close attention to details given in the book and, as in this case, working by rules is not apt to make the student too dependent, instead of teaching him to observe for himself and to devise, to a certain extent, the methods of work he shall follow in each experiment. The free use of symbols in other than equations is especially objectionable in the early stages of the study, as the student becomes impressed with the idea that proficiency in the use and manipulation of chemical symbols is the thing to be acquired and not the principles of the subject. Difficulties encountered and overcome by the ingenuity of the student are a great incentive and give him confidence in his own powers. After taking up in order the common non-metallic elements, the author gives the usual methods of separating the members of the different groups of metals. These are given without any preliminary study of the different members of the groups, which would enable one to understand the principles upon which the separations are based and must be entirely mechanical in their nature. No text-book is recommended for use with this laboratory guide, and while it can probably be used with good results in many cases it must be with the constant attention of the teacher and the elimina-

tion of some features, especially the part relating to the separation of the metals.

J. E. G.

*Elements of Chemistry.* By RUFUS P. WILLIAMS, in charge of the Chemical Department of the English High School, Boston. Boston, Ginn & Co. 1897.

The title of this book is rather a misnomer, as the author has gone beyond the capacity of an elementary student and has introduced much matter which would only bewilder a beginner in the subject. As he says in the preface, 'the division of matter into coarse and fine print enables a choice to be made' according to the needs of the class. He is a strong advocate of graphic methods of representing compounds, and 'and many topics—such, for example, as valence, etc.—have been treated in quite an original manner.' On turning to this chapter we find that he represents valence graphically 'by using cubical kindergarten blocks with small screw-eyes and hooks' to represent the bonds and their method of attachment. Before studying the simplest element he instructs the student in the methods of writing symbols and finding molecular weights by rule. The subject, omitting the theoretical part, is treated in a very thorough manner for an elementary book; but the arrangement, especially that of the non-metals, is not as systematic as it might be. The latter part of the book contains an account of some common organic substances and a chapter on the chemistry of fermentation and of life.

J. E. G.

*Congreso Internacional de Americanistas.* Actas de la Undecima Reunion, Mexico, 1895. Mexico, 1897. 1 Vol. Pp. 576.

The previous volumes of the International Congress of Americanists all contain some valuable articles and all a good deal of trash. In both these respects the present *Compte-rendu* resembles its predecessors. Why people who pretend to be scholars still want to publish articles showing that the name of the Atlas mountains is derived from the Nahuatl 'Atlan;' that the Otomis are related to the Chinese; that the cross of Palenque is a proof of Buddhistic

worship in America ; that the ' Toltecs ' spooked around Central America ; that the fables of the Aztec story-tellers can be assigned local existence, and the like, is hard to understand; and why a scientific society spends its money in publishing such stuff would be more inexplicable did we not all appreciate the importance of not offending the genial members of such reunions.

Fully half this volume is taken up with such padding and with second-hand material. Rather than occupy the reader's time with a discussion of it, it will be more profitable to mention some of the really valuable contributions to American studies, which are between the covers of the nearly six hundred pages.

Naturally we look for special attention to the Nahuatl language. Nor are we disappointed. The Rev. Hunt Y. Cortes, distinguished by his previous studies in this tongue, offers a number of specimens of the classical idiom, with excellent analyses and grammatic observations ; Don José Maria Vigil called attention to the ancient Mexican songs still extant, and Don Mariano Sanchez Santos, an accomplished Nahuatl scholar, gave translations of several of them. Lauro Castanedo sent copies of a few old religious manuscripts in a dialect, evidently corrupt, of the ancient tongue. Other linguistic memoirs are presented, one from Dr. Pimentel, on the present classification of the Mexican languages ; a catalogue of periodicals published in North American native tongues, by Sr. Cesare Poma ; a valuable grammatical sketch of the Guaraouno tongue, by M. L. Adam ; two by M. Raoul de la Grasserie, on the Auca and the Yunga ; a comparison of the Huasteca and Nahuatl, by Alvarez y Guerrero, and several rather wild flings at the derivations of some native names.

The only contribution of moment offered to the study of the hieroglyphic writing was a paper by Dr. Nicolas Leon on the employment of a script of the kind, of course devised by their European teachers, among the Otomis, in a period long after the Conquest. We learn from this memoir that the spiritual fathers did all they could to keep the Indians in ignorance of white civilization, and thrashed them if they tried to learn Spanish !

The papers on the ancient monuments are

moderately full. Señor Rodriguez describes the pyramid of Tepozteco at length, and Mr. H. S. Jacobs, in a somewhat flowery style, runs over the cliff-dwellers and the ' dead empires, the wonderful evidence of prehistoric life, to be found in Mexico !'

Some minute questions in Mexican history are elucidated, and Mr. Thomas Wilson advances various reasons showing the great antiquity of man in America. Professor Mariano Barcena submits again the evidence for the prehistoric man of the valley of Mexico, our old friend, the ' Hombre del Peñon,' about whom our departed colleague, Professor Cope, became skeptical in his latter days.

There are some other articles in the volume, good in the way of compilations ; one on the media of exchange of ancient Mexico, by Mr. J. W. Bastow ; one on the ancient commerce of Yucatan, by the late Bishop Carrillo Ancona ; on the medical knowledge of the Aztecs, by Alatrisme de Lope ; and others of minor importance.

Although the scientific value of the volume may be disappointing, the foreign associates were unanimous in their sincere recognition of the generous hospitality they received from the Mexican government and citizens ; and it is very creditable to the Committee of Publication that the volume has appeared thus promptly, while the report of the Congress in Stockholm, in 1894, to employ a Gallicism, still ' lets itself be waited for.'

D. G. BRINTON.

*Totem Tales.* W. S. PHILLIPS. Chicago, Star Publishing Co. 1896. Pp. 326.

The present book pretends to be a collection of myths from the coast of the North Pacific Ocean. The author says : " The stories contained in this little volume under the title of ' Totem Tales ' are the result of careful study and research among various tribes of Indians of the Northwestern Pacific Coast. The Indian peculiarity of narration is kept, as nearly as possible, consistent with an understandable translation from the native tongue into English." If it were not for these claims the book might pass unnoticed, but since the author's expressions might be taken seriously it may be well to