The occurrence of this particular error exemplifies the 'irony of fate.' Among the forty terms on the list this is the only one to which my own conversion was recent. For years I used *conarium* without variation. The change was due to four considerations: 1. The arguments of Prof. H. F. Osborn and Dr. E. C. Spitzka. 2. The recognition of the desirability of verbal correlation with the ventral extension, hypophysis ('*corpus pituitarium*') and the other dorsal outgrowth, paraphysis. 3. The fuller appreciation of the force of Dr. W. H. Dall's declaration, "The human mind wearies of too many names and much more readily assimilates a new meaning for an old one."* 4. The abandonment, or rather relaxation, of one of the requirements of technical terms which was enunciated twenty-five years ago, viz., 'independence of context for signification.'† It is hardly conceivable that any misapprehension should arise from the employment of one and the same word, *epiphysis*, for a part of the brain and for the end of a long bone.

Permit me to express the hope that journals that republished your article may likewise print the corrective portion of this letter, and also to state that the next number of the *Journal of Comparative Neurology* will contain an extended commentary upon the report of the Neurological Association, together with correspondence on the general subject between Prof. W. His and myself.   BURT G. WILDER.

SIASCONSET, MASS., August 3, 1896.

THE METRIC SYSTEM.

TO THE EDITOR OF SCIENCE: I was much interested in Mr. Stover's query, "Is not the country ripe enough to accept the metric system?" and wish to say that the practical difficulties are probably largely overestimated. Of all peoples those of the United States, are the most adaptive, and the change would involve those who are best able to assimilate the new method.

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* From a letter to me. Published as Aphorism xv. in the article 'Anatomical Terminology,' Reference Handbook of the Medical Sciences, VIII., 520, 1889.

† 'Intermembral Homologies,' Boston Soc. N at. Hist., Proceedings, XIV., 172, April 5, 1871.

As Greeley proclaimed about 1871, "The way to resume is to resume," so the way to adopt is to adopt. If those from whom the initiative must come would initiate, there would not be much trouble. Let all architects and builders write their dimensions in metric measures, and they will soon find them executed without trouble.

This company manufactures pulleys, etc. A few years ago we established an agency in France and our orders came in metric measures. We simply sent to Chicago for a metric scale and then filled the order. It did not cause any noticeable trouble. It is just as easy for the saw-mill man to cut his lumber according to one measure as the other, and in a short time he would become equally familiar with both systems, and *then* the metric system would be established. The same results would follow through all the trades, but the workman will not use the improvement until he is obliged to.

R. D. D. SMITH.

DODGE MANUFACTURING CO.,
MISHAWAKA, IND.

SCIENTIFIC LITERATURE.

MATHEMATICAL PAPERS READ AT THE INTERNATIONAL MATHEMATICAL CONGRESS HELD IN CONNECTION WITH THE WORLD'S COLUMBIAN EXPOSITION, CHICAGO, 1893.

THE papers presented at the Chicago Mathematical Congress of 1893 have recently been issued in book form by Macmillan & Co., under the suggestive subtitle of Vol. I. of Papers Published by the American Mathematical Society. The papers are edited by the Committee of the Congress, Professors Moore, Bolza and Maschke, of the University of Chicago, and Prof. White, of Northwestern University. The committee were embarrased at the outset by the fact that no financial provision had been made for the publication, which was finally made possible by the generous subscription of a guarantee fund of one thousand dollars by the Mathematical Society, its members individually and other mathematicians. The handsome volume before us reflects great credit on all concerned in its production.

The Congress was decidedly cosmopolitan in the authorship of the papers presented and the subjects treated. Of the forty-five papers, fourteen were from America, two from Austria, four from France, .twenty from Germany, three from Italy, one from Russia and one from Switzerland. Germany was officially represented at the Congress by an Imperial Commissioner, Prof. Felix Klein, of Göttingen, who brought nearly all the papers contributed by his countrymen. It is a singular circumstance that the British Empire did not furnish a single contribution nor a single representative. Roughly classified, seven of the papers deal with geometry, ten with theory of functions, eight with the theory of groups, seven with the theory of numbers, two each with differential equations, invariants and mechanics, and seven with miscellaneous subjects.

In his opening address before the combined Congresses on Mathematics and Astronomy, Prof. Klein drew attention to a matter of great interest to all scientists, viz., a present marked revulsion from the tendency of mathematics to run into isolated specialities, which has been so pronounced for a century. At present the movement is decidedly toward unification and breadth, not only in mathematics itself, but in its relation to other sciences. The general conceptions of 'function' and of 'group' are powerful coordinating elements. Two of the Chicago papers are especially mentioned by Klein as representing the new tendency. One of these, by Schönflies, deals with the connection between the theory of groups and crystallography. The other, by Burkhardt, discusses the relations between astronomical problems and the theory of linear differential equations. A third paper, by Fricke, on the automorphic functions and arithmetic (i. e., theory of numbers), illustrates the work of Klein's own school in the unification of strictly mathematical branches.

Of the other papers on the theory of functions, one is by Bolza, on Weierstrass' system of hyperelliptic integrals; one by Hermite, on certain fundamental propositions in the theory of elliptic functions; one by Krause, on the transformation of the fifth degree of the hyperelliptic functions of the first order; two by Macfarlane,

on the definition of the trigonometric functions, and on the principles of elliptic and hyperbolic analysis; one by Pincherle, in summary of certain results relative to the theory of recurrent systems of functions; two by Pringsheim, on the expansion of functions in series and convergency and divergency; and one by Stringham, on a formulary introductory to elliptic functions. Maschke, Moore, Meyer, de Perott, Taber and Cole have articles on special topics in the theory of groups. Halsted gives an account of some salient points in the history of non-Euclidean and hyper-geometries. It is, of course, impossible here to give any detailed account of the contents of these or the other valuable papers in the list. The moral of the present publication, as representing the International Congress, lies not so much in the specific contents of the book, as in the fact that America's workers in mathematics are constantly coming into closer affiliation with those of other lands and strengthening their scientific position by this connection. The other sciences have long had this advantage, but mathematics has received it only within a few years. Our position in this country has been so isolated, and our science so backward here in development, that it will probably be news to most of our colaborers in other fields that the development of mathematics in the present century has probably been as great in actual permanent substance as that of any other science now existing. And it is the function of such meetings as that at Chicago to stimulate the growth of the science and to secure it the recognition to which it is entitled.

F. N. COLE.

COLUMBIA UNIVERSITY.

RECENT TEXT-BOOKS OF GEOMETRY.

Elements of Geometry. By GEORGE C. EDWARDS, Associate Professor of Mathematics in the University of California. New York, The Macmillan Company. 1895. 8°. Pp. xvi+ 293.

Plane and Solid Geometry. Suggestive Method. By C. A. VAN VELZER, Professor of Mathematics in the University of Wisconsin, and GEO. C. SHUTTS, Professor of Mathematics in the State Normal School, Whitewater, Wis.