relieved, as by sinking a vacant shaft down to it, a violent explosion would follow.

The author concluded from Laplace's law of density that the planet Venus has a rigidity equal to that of a corresponding globe of glass, and that the nuclei of all large bodies are effectively of the highest rigidity.   The development of pressure as we decend in the globe was shown to be such as to invalidate the conclusions of Lord Kelvin and Professor G. H. Darwin respecting the consolidation of earth by the building up of a solid nucleus from the sinking of the solidified crust.

G. A. MILLER,
Secretary of the Section.

ON THE DEVELOPMENT OF MATHEMATICAL ANALYSIS AND ITS RELATION TO CERTAIN OTHER SCIENCES. *

ADDRESS DELIVERED BEFORE THE SECTION OF ALGEBRA AND ANALYSIS OF THE INTERNATIONAL CONGRESS OF ARTS AND SCIENCES, ST. LOUIS, SEPTEMBER 22, 1904.

BY PROFESSOR EMILE PICARD.

ONE of the objects of such a congress as that in which we are now assembled is to show the connection between the different parts of science taken in its widest sense.   Moreover, the promoters of this meeting have insisted that the relations between different branches should be put in evidence.   To undertake a study of this kind, the character of which is somewhat indefinite, one must forget that all is in all ; as for algebra and analysis alone, a Pythagorean would be dismayed at the extent of his task, remembering the celebrated formula of the school : "Things are numbers."   From this point of view, my subject would be inexhaustible.   But for excellent reasons I should not attempt so much.   Merely glancing at the development of our science through the ages, and particularly in the last century, I hope to be able to characterize sufficiently the

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* Translated, with the author's permission, by Professor M. W. HASKELL.