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CONTENTS:

MSS. intended for publication and books, etc., intended for review should be sent to the responsible editor, Professor J. McKeen Cattell, Garrison-on-Hudson, N. Y.

THE CENTURY'S PROGRESS IN APPLIED MATHEMATICS.

II.

ANOTHER question of widely general, and of peculiar mathematical interest, is the problem first attacked by Fourier, of the distribution and consequent effects of the earth's internal heat. The most interesting phase of this question is that which relates to the time that has elapsed since the crust of the earth became stable and sufficiently cool to support animal life. It is now nearly forty years since Lord Kelvin* startled geologists especially by telling them that Fourier's theory of heat conduction forbids anything like such long intervals of time as they were in the habit of assigning to the aggregate of paleontological phenomena. On several occasions since then Kelvin has restated his arguments with a cogency that has silenced most geologists if it has not convinced most mathematicians. Quite recently, however, the question has become somewhat less one-sided, since geologists and paleontologists are beginning to defend their positions† while that of

* In a memoir 'On the secular cooling of the earth,' *Trans. Royal Society of Edinburgh*, 1862. Republished in Kelvin and Tait's Treatise on Natural Philosophy, appendix D. Kelvin's latest paper on this subject is entitled 'The age of the earth as an abode fitted for life,' and is published in *Philosophical Magazine*, January, 1899; also in SCIENCE, May 12, 1899.

† See Professor T. C. Chamberlin's paper, "Lord