

## NEW LIGHT ON OUR NUMERALS.

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*Introductory Note.*—It is interesting to see how much new light is constantly being thrown upon chapters in the history of mathematics which have always been more or less obscure. We know, for example, with reasonable certainty the original habitat of our numerals; we know approximately the century in which they were perfected; we have rather positive information as to the century in which they first appeared in European manuscripts; and we are well advised, through the work of Mr. G. F. Hill, as to their variations in form for the last thousand years. It is true that we do not know when or where the zero of our system was first conceived, although we now have some valuable information as to the one that was used by the Mayas, nor do we know the origin of six of the primitive forms of the digits. Furthermore we do not know with any certainty the date of the first appearance of our numerals on the Mediterranean littoral, but we are not without hope that all this information will sometime be forthcoming, at least to some degree.

Our hope that such further knowledge is not beyond our reach is strengthened by a discovery recently made by M. F. Nau, no report of which seems as yet to have appeared in English. Because of the importance of this discovery, I have asked Mr. Ginsburg to make it known to the readers of the BULLETIN and to supplement the simple statement of the discovery by searching out such information as is available concerning the interesting scholar and teacher, Severus Sebokht, in whose writings the first positive trace of the numerals, outside of India, is found. This he has done, and his article is to my mind particularly valuable because of these features: (1) It shows us that these numerals reached the Arab lands a century earlier than was formerly supposed; (2) it shows that the zero was probably not in the system as then mentioned, showing at least that its value was not generally comprehended in the seventh century and possibly confirming the impression that the symbol had not yet been