

### *Numerical Figures*

THE learned, after many contests, have at length agreed that the numerical figures 1, 2, 3, 4, 5, 6, 7, 8, 9, usually called *Arabic*, are of *Indian* origin. The Arabians do not pretend to have been the inventors of them, but borrowed them from the Indian nations. The numeral characters of the Bramins, the Persians, and the Arabians, and other eastern nations, are similar. They appear afterwards to have been introduced into several European nations, by their respective travellers, who returned from the East. They were admitted into calendars and chronicles, but they were not introduced into charters, says Mr. Astle, before the sixteenth century. The Spaniards, no doubt, derived their use from the Moors who invaded them. In 1240, the Alphonsean astronomical tables were made by the order of Alphonsus X. by a Jew and an Arabian; they used these numerals, from whence the Spaniards contend that they were first introduced by them.

They were not generally used in Germany until the beginning of the fourteenth century; but in general the forms of the cyphers were not permanently fixed there till after the year 1531. The Russians were strangers to them, before Peter the Great had finished his travels in the beginning of the present century.

The origin of these useful characters with the Indians and Arabians, is attributed to their great skill in the arts of astronomy and of arithmetic, which required more convenient characters than alphabetic letters, for the expressing of numbers.

Before the introduction into Europe of these Arabic numerals, they used alphabetical characters, or *Roman numerals*. The learned authors of the *Nouveau Traité Diplomatique*, the most valuable work on everything concerning the arts and progress of writing, have given some curious notices on the origin of the Roman numerals. They say, that originally men counted by their fingers; thus to mark the first four numbers they used an I, which naturally represents them. To mark the fifth, they chose a V, which is made out by bending inwards the three middle fingers, and stretching out only the thumb and the little finger; and for the tenth they used an X, which is a double V, one placed topsyturvy under the other. From this the progression of these numbers is always from one to five, and from five to ten. The hundred was signified by the capital letter of that word in Latin C—centum. The other letters D for 500, and M for 1000, were afterwards added. They subsequently abbreviated their characters, by plac-

ing one of these figures before another; and the figure of less value before a higher number, denotes that so much may be deducted from a greater number; for instance, IV signifies five less one, that is four; IX ten less one, that is nine; but these abbreviations are not found amongst the ancient monuments. These numerical letters are still continued by us, in recording accounts in our exchequer.

That men counted originally by their fingers, is no improbable supposition; it is still naturally practised by the vulgar of the most enlightened nations. In more uncivilized states, small stones have been used, and the etymologists derive the words *calculate* and *calculation* from *calculus*, which is the Latin term for a pebblestone, and by which they denominated their counters used for arithmetical computations.

Professor Ward, in a learned dissertation on this subject in the Philosophical Transactions, concludes that it is easier to falsify the Arabic cyphers than the Roman alphabetic numerals; when 1375 is dated in Arabic cyphers, if the 3 is only changed, three centuries are taken away; if the 3 is made into a 9 and take away the 1, four hundred years, are added. Such accidents have assuredly produced much confusion among our ancient manuscripts, and still do in our printed books;

which is the reason that Dr. Robertson in his histories has always preferred writing his dates in *words*, rather than confide them to the care of a negligent printer. Gibbon observes, that some remarkable mistakes have happened by the word *mil.* in mss. which is an abbreviation for *soldiers*, or for *thousands*; and to this blunder he attributes the incredible numbers of martyrdoms, which cannot otherwise be accounted for by historical records.