

tional day at the end of February every fourth or *leap* year, is an example of the principle of *intercalation*, by which the correction was most commonly made. Methods of intercalation for the same purpose were found to exist in the new world. The Mexicans added 13 days at the end of every 52 years. The method of the Greeks was more complex (by means of the *octaëteris* or cycle of 8 years); but it had the additional object of accommodating itself to the motions of the moon, and therefore must be treated of hereafter. The Egyptians, on the other hand, knowingly permitted their civil year to *wander*, at least so far as their religious observances were concerned. "They do not wish," says Geminus,<sup>15</sup> "the same sacrifices of the gods to be made perpetually at the same time of the year, but that they should go through all the seasons, so that the same feast may happen in summer and winter, in spring and autumn." The period in which any festival would thus pass through all the seasons of the year is 1461 years; for 1460 years of  $365\frac{1}{4}$  days are equal to 1461 years of 365 days. This period of 1461 years is called the *Sothic* Period, from Sothis, the name of the Dog-star, by which their *fixed* year was determined; and for the same reason it is called the *Canicular* Period.<sup>16</sup>

Other nations did not regulate their civil year by intercalation at short intervals, but rectified it by a *reform* when this became necessary. The Persians are said to have added a month of 30 days every 120 years. The Roman calendar, at first very rude in its structure, was reformed by Numa, and was directed to be kept in order by the perpetual interposition of the augurs. This, however, was, from various causes, not properly done; and the consequence was, that the reckoning fell into utter disorder, in which state it was found by Julius Cæsar, when he became dictator. By the advice of Sosigenes, he adopted the mode of intercalation of one day in 4 years, which we still retain; and in order to correct the derangement which had already been produced, he added 90 days to a year of the usual length, which thus became what was called *the year of confusion*. The *Julian Calendar*, thus reformed, came into use, January 1, B. C. 45.

#### *Sect. 4.—Attempts at the Fixation of the Month.*

THE circle of changes through which the moon passes in about thirty days, is marked, in the earliest stages of language, by a word which implies the space of time which one such circle occupies; just

<sup>15</sup> *Uranol.* p. 88.

<sup>16</sup> Censorinus *de Die Natali*, c. 18.