nearly than he could ascertain from any evidence and calculation known to him. It is so exact that it is still used in calculating the new moon for the time of Easter; and the *Golden Number*, which is spoken of in stating such rules, is the number of this Cycle corresponding to the current year.[24]

Meton's Cycle was corrected a hundred years later (330 B. C.), by Calippus, who discovered the error of it by observing an eclipse of the moon six years before the death of Alexander.[25] In this corrected period, four cycles of 19 years were taken, and a day left out at the end of the 76 years, in order to make allowance for the hours by which, as already observed, 6940 days are greater than 19 years, and than 235 lunations: and this *Calippic period* is used in Ptolemy's Almagest, in stating observations of eclipses.

The Metonic and Calippic periods undoubtedly imply a very considerable degree of accuracy in the knowledge which the astronomers, to whom they are due, had of the length of the month; and the first is a very happy invention for bringing the solar and lunar calendars into agreement.

The Roman Calendar, from which our own is derived, appears to have been a much less skilful contrivance than the Greek; though scholars are not agreed on the subject of its construction, we can hardly doubt that months, in this as in other cases, were intended originally to have a reference to the moon. In whatever manner the solar and lunar motions were intended to be reconciled, the attempt seems altogether to have failed, and to have been soon abandoned. The Roman months, both before and after the Julian correction, were portions of the year, having no reference to full and new moons; and we, having adopted this division of the year, have thus, in our common calendar, the traces of one of the early attempts of mankind to seize the law of the succession of celestial phenomena, in a case where the attempt was a complete failure.

Considered as a part of the progress of our astronomical knowledge, improvements in the calendar do not offer many points to our observation, but they exhibit a few very important steps. Calendars which, belonging apparently to unscientific ages and nations, possess a great degree of accordance with the true motions of the sun and moon (like

---

[24] The same cycle of 19 years has been used by the Chinese for a very great length of time; their civil year consisting, like that of the Greeks, of months of 29 and 30 days. The Siamese also have this period. (*Astron.* Lib. U. K.)

[25] Delamb. *A. A.* p. 17.