

but is not required for the simple continuance of life when no action is going on ; and illustrates this opinion by the instance of the common garden snail.

*Remarks on a Correction of the Solar Tables required by Mr. South's Observations.* By G. B. Airy, Esq. M.A. Fellow of Trinity College, Cambridge, and Lucasian Professor of Mathematics in the University of Cambridge. Communicated by Dr. Young, F.R.S., &c. Read February 15, 1827. [*Phil. Trans.* 1827, p. 65.]

The discordancies observed by Mr. South between the sun's right ascension, as deduced from observation, and those given in the Nautical Almanac, follow a law so simple as not to allow of their being regarded as errors of observation, or arising from any casual cause, but justify us in attributing them to imperfections in the solar tables, with the exception of three days, in which there seems to be some ground to suspect error of computation.

A single inspection of these discrepancies, Mr. Airy observes, suffices to show that they arise almost entirely from an error in the epoch, and an error in the place of the perigee. From the peculiar form of the tables in Vince's Astronomy, which give great facility to the introduction of an error in the excentricity, he was induced at first to suspect that one might exist ; but on calculation found the error in the equation of the centre so small as to be entirely insensible. He then proceeds to detail the process by which, from Mr. South's observations, he has deduced the amount of the several errors, which consist in regarding the epoch, the mean anomaly, and the equation of the centre, as erroneous by three very small unknown quantities, and forming as many equations of condition for determining them as there are observations. These combined and resolved, so as to give the most probable result, lead to the conclusions, first, that the correction of the equation of the centre is evanescent ; secondly, that the epochs of the sun must all be increased by 9'', and the epochs of the perigee each by 1' 48''.

*On the mutual Action of the Particles of Magnetic Bodies, and on the Law of Variation of the Magnetic Forces generated at different Distances during Rotation.* By S. H. Christie, Esq. M.A. F.R.S. Read February 15 and 22, 1826. [*Phil. Trans.* 1827, p. 71.]

The results obtained by the author, described in a former communication, when a copper disc was made to revolve under a magnetized needle, appearing to him not likely to lead to an accurate knowledge of the law of magnetic attraction, developed during rotation, from the effect of lateral attraction ; he was induced to resume the inquiry, substituting a ring for a disc, expecting that, as no lateral forces would here be called into action, the results would be more uniform, and in this expectation he was not disappointed. One of the first phenomena encountered by him in this research, was a very