tate to admit a possible error of more than 10' independent of local attraction, and this cause might easily increase the error to a half degree. I do not see how Prof. Locke can refuse his assent to this, after publishing the dip at Cincinnati to be in Nov. 1837, 70\degree 45.7', and in April, 1840, writes, "I have lately found the dip at Cincinnati to vary between 70\degree 23' and 70\degree 29'," and yet in his last article he assigns 0'.86 as the limit of instrumental error. As for the errors of my own observations, given on page 87, I have twice observed the dip at Cleveland, on two opposite sides of the city, and in both instances have obtained a result greater than was to have been expected from its geographical position. The other three observations were in Michigan, where I was told iron ore was quite abundant.


It has long been a desideratum to the American geologist, to have the fossils of the widely extended beds of the tertiary formation of this country, accurately described, and compared with those of a similar date in Europe. The works of my father, Mr. Conrad, and other geologists, have done much to effect this, but there are, still, no doubt, many undescribed species remaining. The following descriptions of species, which the author presumes to be new, are as exact as he was able to make them, as he frequently labored under the disadvantage of having but one specimen of a shell, and that one often fractured. They were mostly obtained from a box of sand from the tertiary deposit at Claiborne, which my father has identified with the London clay, or calcaire grossiere of European geologists. The author hopes that his descriptions are sufficiently clear and minute to determine the species permanently.

FAMILY MELANIANA.

Genus Passithea.—Lea.

P. minima. Pl. 1, fig. 1.

P. testà subulatà, imperfectà, polità, tenuissimà; apice obtusà; suturis minimis; anfractibus ——, planulatis; columellà laxi; aperturà ovata.
Description of some New Species of Fossil Shells.

Genus Voluta.—Linnaeus.

V. dubia. Pl. 1, fig. 23.

V. testâ fusiformi, crassâ, longitudinaliter sulcatâ, striis transversis minimis; spirâ valde elevatâ, mammillatâ; anfractibus septem, planulatis; suturis minimis; columellâ quadriplicatâ; pleris inferioribus quàlibus superioribus; aperturâ angustâ.

Shell fusiform, thick, with very small transverse lines, longitudinally sulcate; spire very elevated, mammillate; whorls seven, flat; sutures very small; columella with four folds, the lower ones equal to the upper ones; mouth narrow.


Remarks.—The sulcations become more strongly marked upon the last whorl. It is with some doubt, that I place this singular shell among the Volutae, to which genus, however, it seems to belong, from its mammillated apex; its general form, however, is that of a Mitra, while the folds on the columella are between the two, being all equal.* The mouth is only half as long as the shell, instead of extending nearly from the apex to the base, as in most Volutae. Mr. Conrad has described two species of Mitra from Claiborne, the M. pactilis and M. bolearis, which, as they have mammillated spires, seem to me rather to belong to the Volutae.

FAMILY CONVOLUTA.

Genus Conus.—Linnaeus.

C. parvus. Pl. 1, fig. 24.

C. testâ conica, laevi, polita, crassa; anfractibus —, planulatis, suprâ et transversâ striatis, longitudinaliter et obliquè plicatâ infra angulatum; suturis parvis; basi striatâ; aperturâ angustissima.

Shell conical, smooth, polished, thick; whorls —, flat, transversely striate above, longitudinally and obliquely folded below the angle; sutures small; base striated; mouth very narrow.

Length —. Breadth 12 of an inch.

Remarks.—This little shell has nothing remarkable about it, except its folds near the shoulder, which, together with its small size, distinguish it from the C. sauridens of Conrad.

* The distinction between Mitra and Voluta is thus drawn by Lamarck, Animalia sans Vert. Vol. vii, part 1, p. 328. "C'est avec les Mitres que les Volutae ont le plus de rapports; mais elles en sont éminemment distinguées: 1, par les plis de leur columelle dont les inférieurs sont les plus gros et les plus obliques; 2, par l'extrémité de leur spire qu'il est obtuse ou en mammelon."