

all the features of a coal-field, that many years since extensive works were carried on in the expectation that coal might be obtained of suitable quality for economical purposes. The search was unsuccessful, but the attempt deserves not the censure that was bestowed upon it, in the infancy of geological science (See Sir J. F. W. Herschel's Discourse on *Nat. Phil.*). Experience has since shown, that although the true coal-measures are only found beneath the saliferous formation, the production of good combustible bituminous coal is not necessarily restricted to any period or series of strata, but may occur wherever the local conditions were favourable to the complete bituminization of beds of vegetable matter. In fact, the productive coal-fields of Bückeburg, in Hanover, are situated in deposits of the Wealden epoch (*Wond.* p. 688.). A microscopical examination of the lignite of Tilgate Forest, has hitherto afforded me no trace of structure; from which it may be presumed, that this substance has not resulted from coniferæ, since their vascular tissue is easily detected in coal, but from plants possessing a less durable organization.

Many interesting facts relative to the carbonization of vegetables, came under my observation during my researches in the Wealden strata; and it is a subject of regret to me, that circumstances prevented my following up the investigation of those very imperfectly explored deposits. Small nodular portions of coal, in which no structure is apparent,