stone generally so applied on the continent, which is brought from the quarries of Solenhofen, and is of much more recent formation.

The slate-clay with which the lias alternates, is grey, brown, or black, is frequently bituminous, and readily divides into laminæ as thin as common pasteboard.

To the above general description of this formation we have added in the note below some further particulars extracted from memoranda kindly lent to the Editor by Mr. Greenough;*

* *Synonymes.* (Rudge's Glocestershire), Alum shale, Doggers, Scar of Whitby. The etymology of this word is unknown to me: it may perhaps be connected with the acknowledged excellence of some of the beds of this series as a cement. The Liais of the French is a very different substance.

Some of the beds of the lias are used as building stones, others as slabs, hearth-stones, grave-stones, &c.

At Kenton Mandeville the common slabs vary from 10 to 30 feet in length, and from 12 to 15 in width: but one has been raised containing 500 superficial feet.

Slabs of the Cotham stone are sometimes $2\frac{1}{2}$ feet long, and seven or eight inches thick.

The marle-stone is used for walls, slabs, and flooring; that of Binton and Grafton in Warwickshire, which is waved like the Cottam, is used as a marble for chimney-pieces, also for paving, for stone seats, &c. At Puckeridge hill, south-east of Taunton in Somersetshire, it is burnt for manure. At Wingfoot, Red hill, and Bidford, about four miles from Stratford upon Avon, the lias assumes the character of a marble

The lias is never variegated in colour like common marble, nor brecciated, nor does it admit of brilliancy or depth of tint, but it occasionally exhibits, especially in specimens cut and polished longitudinally, dendritical appearances (Cottam stone or marble), which may be supposed to be the consequence of the enlargement of the concretions in which this stone is found, since it occurs in detached masses beneath the surface: the upper surface of the stone presents branches and prominences which sometimes represent the interlacings of ivy. They are commonly used in the rough state for the rustic work of gateways.

The irregular beds consist of fibrous limestone and *cement* stones (septaria) so called because used in making Parker's cement. Where the fibres are not parallel to each other, they often form that irregular substance so common in the Coal-measures, to which an organic structure has often erroneously been attributed, and termed the cone-in-cone coral. The cement-stones are of different sizes; they are generally solid, and seem sometimes to have had a cornu ammonis or other shell, or wood, as a nucleus to form upon. Some of them have septa, which are occupied by calcareous spar or bitumen; the quantity of iron they contain is variable; some are coated with pyrites, or have lumps of it adhering to them; at Watchet, sulphate of strontian finely crystallized occurs in these concretions. When large and flat, these cement-stones are termed girdles. Along the Whitby coast, these girdles have given a partial protection to the shale, and thus occasioned a number of insulated and grotesque masses: they often turn red on exposure to air.

Some of the beds in the lias form a rich argillaceous iron-stone.

Near Axminster in Dorsetshire, the lias clay is so bituminous in some places, that it has been sunk through in search of coal.