

section is made in any line not in the direction of the point of attachment. There are, indeed, occasionally seen small oolitic and pisolitic grains, of which the form is globular; for the nucleus, having been for a time in motion in the water, has received fresh accessions of matter on all sides.

In the same manner I have seen, on the vertical walls of large steam-boilers the heads of nails or rivets covered by a series of enveloping crusts of calcareous matter, usually sulphate of lime; so that a concretionary nodule is formed, preserving a nearly globular shape, when increased to a mass several inches in diameter. In these, as in many travertins, there is often a combination of the concentric and radiated structure, and the last-mentioned character is one of those in which the English magnesian limestone agrees with the Italian travertins.

Another point of resemblance between these rocks, in other respects so dissimilar, is the interference of one sphere with another, and the occasional occurrence of cavities and vacuities, constituting what has been called a honeycombed structure, and also the frequent interposition of loose incoherent matter, between different solid spheroidal concretions. Yet, notwithstanding such points of analogy, the difference in the mode of formation is very great, for, as Professor Sedgwick observes, there are proofs of the concretionary arrangement in the magnesian limestone having taken place subsequently to original deposition, the spheroidal forms being often quite independent of the direction of the laminae.*

Bulicami of Viterbo.—There are countless other places in Italy where the constant formation of limestone may be seen, as on the Silaro, near Pæstum, or on the Velino at Terni. The hot springs in the vicinity of Viterbo, which I visited in 1828, deserve particular notice. Their petrifying powers were recorded by Dante, so long ago as the year 1300.

“Quale del Bulicame esce'l ruscello.”

“E'en as the rivulet from Bulicame,” &c.

Inf. xiv. 79.

About a mile and a half north of that town, in the midst of a sterile plain of volcanic sand and ashes, and near the hot baths called the Bulicami, a monticule is seen, about 20 feet high and 500 yards in circumference, entirely composed of concretionary travertin. This rock has been largely quarried for lime, and much of it appears to have been removed. The laminae are very thin, and their minute undulations so arranged, that the whole mass has at once a concentric and radiated structure. The beds dip at an angle of 40° or more from the centre of the monticule outwards. The whole mass has evidently been formed gradually, like the conical mounds of the geysers in Iceland, by a small jet or fountain of calcareous water, which overflowed from the summit of the monticule, but which is now dried up. A spring of hot water still issues (1828) in the neighbour-

* *Geol. Trans.*, second series, vol. iii. p. 37.