

seven, that of the Doric to eight, that of the Ionic to nine, and that of the Corinthian to ten diameters. In describing the proportions of the Belemnite, I shall borrow a hint from the architect, by making my scale one of diameters also ; fixing my callipers, not at the base of the shaft, but one-fourth of its entire length higher up. Let the reader imagine a small cylindrical column of brown polished stone, diminishing from the base upwards for three-fourths of its height, much in the same proportions as one of the Grecian columns diminishes, and then in the remaining fourth suddenly sweeping to a point. Its length—eight inches in the present instance—is equal, like that of a Corinthian shaft, to ten of its diameters. Within this solid column we find an internal cone rising from the common base, the whole of which it occupies, and terminating in the apex, at about one-third the height of the whole. It is different in colour and structure from the brown pointed shaft at which it is included. The shaft or column shows as if it had been formed, like a dipped candle, by repeated accessions to its outer surface ; whereas the internal cone shows that it has been formed by accessions to its base. The shaft seems to have grown as a tree grows, and exhibits its internal concentric rings crossed by lines radiating from the centre, just as the yearly rings of the tree are crossed by the medullary rays : the internal cone, on the contrary, was reared course after course, as a pyramid is built of ashlar,—with this difference, however, that it was the terminal course of the apex that was laid first, and that every succeeding course was added to the base. The entire Belemnite was originally of greater length than the specimen before us indicates ; for the cone extended very considerably beyond the base of the column, and beyond the cone there was a still further prolongation of a kind of horny sheath, composed of the internal shell of an extinct order of cuttle-fish, its substitute for a vertebrate column ; just as the existing loligo