dron; indeed, it is not uncommon in Coalbrook Dale, and elsewhere, to find these *strobili* or fruits terminating the tip of a branch of a well characterized *Lepidodendron.*

Equisetaceæ.—To this family belong two fossil species of the Coal one called *Equisetum infundibuliforme* by Brongniart, and found also in Nova Scotia, which has sheaths, regularly toothed, ribbed, and overlapping like those on the young fertile stems of *Equisetum fluviatile.* It was much larger than any living "Horsetail." The *Equisetum giganteum,* discovered by Humboldt and Bonpland in South America, attained a height of about 5 feet, the stem being an inch in diameter; but more recently Gardner has met with one in Brazil 15 feet high, and Meyen gives the height of *E. Bogotense* in Chili as 15 to 20 feet.

Calamites.—The fossil plants, so called, were originally classed by most botanists as cryptogamous, being regarded as gigantic *Equiseta;*

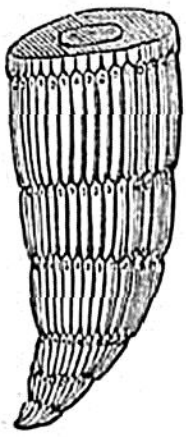
Fig. 475.

Calamites cannæformis, Schlot. (Foss. Flo. 79.) Common in English coal.

Fig. 476.

Calamites Suckowii, Brong.; natural size. Common in coal throughout Europe.

Fig. 477.



Radical termination of a Calamite. Nova Scotia.

for, like the common "horsetail," they usually exhibit little more than hollow jointed stems, furrowed externally. (See figs. 475, 476, 477.)

Mr. Salter stated to me, many years ago, his conviction that the calamite, as frequently represented by paleontologists, was in an inverted position, and that the conical part given as the top of the stem was in truth the root. This point Mr. Dawson and I had opportunities of testing in Nova Scotia, where we saw many erect calamites, having their radical termination as in the annexed figure (fig. 477). The scars, from which whorls of vessels have proceeded, are observed at the upper, not the lower end of each joint or internode.* The specimen, fig. 475, therefore, is no doubt the lower end of the plant, and I have therefore reversed its position as given in the work of Lindley and Hutton.

M. Adolphe Brongniart, following up the discoveries of Germar and Corda, has shown in his "Genres de Végétaux Fossiles," 1849, that many

* See Dawson, Geol. Quart. Journal, 1854, vol. x. p. 35.