

Pottsville specimen of *Aneimites obtusus* Lx. (Fig. 928) was over a foot across. A Tree-fern also, *Caulopteris Lockwoodi* Dn., has been obtained at Gilboa. Fig. 929 represents a *Sigillaria* from the Chemung of Owego, N.Y., and 930, a *Lepidodendron* from Elmira, N.Y., the latter with very small leaf-scars. In the specimen of Fig. 929, the upper part shows the scars as they appear on the inner surface of the bark. Specimens of *L. Gaspianum*, of the Lower Devonian, and some other species, have also been found in the Chemung beds of New York; and *L. corrugatum* of Dawson in the Chemung of Ohio, and also at the base of the Carboniferous near Pottsville, Pa., and in Virginia. The Gaspé species accompanying the *Pterichthys Canadensis*, and indicating thereby that the beds are Upper Devonian (Dawson), are *Archæopteris Gaspensis* Dn., *Aneimites obtusus* Lesq., and *Rhacophyllum Brownii* Dn.

Fig. 931 represents a remarkable plant from beds in Wyoming County, Pa., referred to the lower part of the Catskill series. Dawson regards it as belonging to the Cordaites group, under Gymnosperms. The fruit enlarged is shown at *b*.

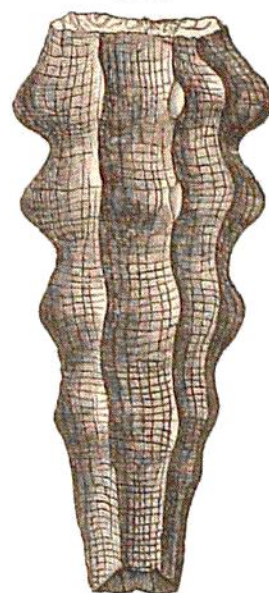
The black shales of the Upper Devonian in New York, Canada, Ohio, and elsewhere, like those of the Lower Devonian, abound in *Sporangites* (page 596). The facts show that the simple plants—the Rhizocarps—were, as Dawson states, very abundant in the waters. Dawson speaks of the spores as “dispersed in countless millions of tons through the Devonian shales of Canada and the United States,” and as being the source of their black color and their oil-yielding character.

ANIMALS. 1. **Spongiozoans.**—The network hexactinellid Sponge, *Dictyophyton tuberosum* of Conrad, occurs in the Chemung, where there are also other species of the genus. *Uphantenia Chemungensis* of Vanuxem is another peculiar glass Sponge of the Chemung, found near Owego, N.Y., first referred to the Sponges by Whitfield.

2. **Corals and Crinoids.**—These are not common in the Portage or Chemung group. Some calcareous beds of the Chemung have afforded Corals of the genera *Zaphrentis* and *Heliophyllum* (near *H. Halli* of the Hamilton); also remains of Crinoids, showing that these animals were absent from the Upper Devonian only because the conditions of the New York and the bordering seas were unfavorable; they were back when the seas were again of sufficient purity.

3. **Molluscoïds.**—Some of the few Genesee and Portage Brachiopods are represented in Figs. 933 to 936. In the lettering underneath the cut the letters G. and P. are initials of Genesee and Portage. Besides the genera represented in the figures, *Chonetes* and *Productella* are also prominent.

932.



Sponge. — *Dictyophyton tuberosum*.