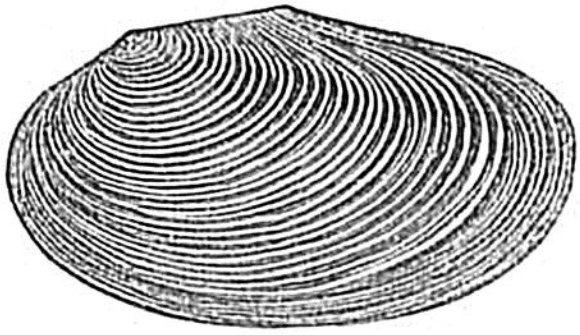
boniferous." The prevailing shell which characterizes the carbonaceous schists of this series, both on the Continent and in England, is *Posidonomya Becheri* (fig. 535). Some well-known mountain-limestone species, such as *Goniatites crenistria* (see fig. 530) and *G. reticulatus*, also occur in the Hartz. In the associated sandstones of the same region, fossil plants, such as *Lepidodendron* and the allied genus *Saginaria*, are common; also *Knorria*, *Calamites Suckovii*, and *C. transitionis*, Göpp., some peculiar, others specifically identical with ordinary coal-measure fossils. The true geological position of these rocks in the Hartz was first determined by MM. Murchison and Sedgwick in 1840.*

Fig. 535.



Posidonomya Becheri, Gold. Lower Carboniferous.

CARBONIFEROUS LIMESTONE IN NORTH AMERICA.

The coal-measures of Nova Scotia have been described (p. 377). The lower division contains, besides large stratified masses of gypsum, some bands of marine limestone almost entirely made up of encrinites, and, in some places, containing shells of genera common to the mountain limestone of Europe.

In the United States the carboniferous limestone underlies the productive coal-measures; and, although very inconspicuous on the margin of the Alleghany or Great Appalachian coal-field in Pennsylvania, it expands in Virginia and Tennessee. Its still greater extent and importance in the Western or Mississippi coal-fields, in Kentucky, Indiana, Iowa, Missouri, and other western states, has been well shown by Dr. D. D. Owen. In those regions† it is about 400 feet thick, and abounds, as in Europe, in shells of the genera *Productus* and *Spirifer*, with *Pentremites* and other crinoids and corals. Among the latter, *Lithostrotion basaltiforme* or *striatum* (fig. 516, p. 404), or a closely-allied species, is common.

* Trans. Geol. Soc. London, 2d series, vol. vi. p. 228.

† Owen's Geol. Survey of Wisconsin, &c., 1852.