

and which sometimes communicates to them a marvellous resemblance to the netted under surface of an exogenous leaf. Flattened stems of plants and layers of cortical matter, when carbonised, shrink in such a manner as to produce minute reticulated cracks. These become filled with mineral matter before the coaly substance has been completely consolidated. A further compression occurs, causing the coaly substance to collapse, leaving the little veins of harder mineral matter projecting. These impress their form upon the clay or shale above and below, and thus when the mass is broken open we have a carbonaceous film or thin layer covered with a network of



FIG. 11.—Cast of shrinkage cracks (Carboniferous, Nova Scotia), illustrating pretended Algæ.

raised lines, and corresponding minute depressed lines on the shale in contact with it. The reticulations are generally irregular, but sometimes they very closely resemble the veins of a reticulately veined leaf. One of the most curious specimens in my possession was collected by Mr. Elder in the Lower Car-

boniferous of Horton Bluff. The little veins which form the projecting network are in this case white calcite; but at the surface their projecting edges are blackened with a carbonaceous film.

*Slickensided bodies*, resembling the fossil fruits described by Geinitz as *Gulielmites*, and the objects believed