

coast of Northumberland. This fragment is about five feet high, and two feet three inches in diameter at its base.\* Scale one-twenty-fourth. (Sopwith.)

2. Fragment of the bark on the trunk of a *Sigillaria*, from Earl-Fitzwilliam's coal mine at Elsecar, near Rotherham. In this mine many large trunks are seen inclined in all directions, and some nearly vertical. (See V. I. p. 470, Note.) The bark is converted into a thin lamina of coal, and remains attached to the lower portion of this specimen. It exhibits on its outer surface scars formed by the articulations of the bases of leaves; these are penetrated near their centre by three apertures for vessels that passed from each leaf into the trunk. The decorticated upper part of this specimen presents an impression of its striated internal surface, and exhibits beneath each scale two oblong parallel apertures, through which the vessels from a leaf penetrated the trunk. Scale one-half. (Original.)

The substance of the trunk must have been in a state of decay, before the mud, which is now hardened into shale, could have entered the interior of the bark. When trunks of this kind are inclined at an angle exceeding  $45^\circ$ , they are usually distended with sandstone, or sandy shale; when at a less angle than  $45^\circ$ , they are most commonly compressed, and have only a thin flat portion of shale, formed of indurated mud within their bark. The bark, wherever it has not perished, is converted to coal.

- 2'. Articulating leaf-scar on the exterior of the bark of another large trunk of *Sigillaria* from Elsecar. Nat.

\* M. Ad. Brongniart found a stem of *Sigillaria* in a coal mine at Essen in Westphalia, which was dichotomous near its top.