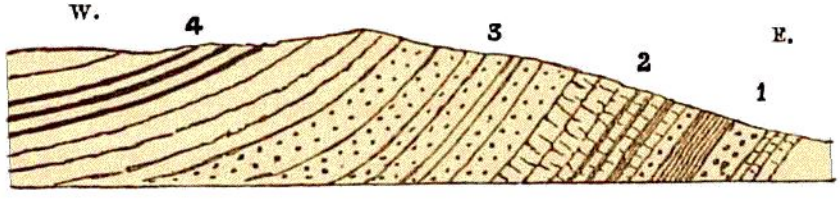
(sometimes the very same beds) gradually change from so-called bituminous to anthracitic varieties. It is remarkable that anthracite usually occurs in coal-fields the strata of which have been much disturbed and contorted, as, for instance, in the mountains of Pennsylvania. Anthracite is simply a metamorphic variety of coal; and in Pembrokeshire, where the coals are most anthracitic, the strata have been violently contorted. There is a connection between the heat that produced metamorphism and the lateral pressure that produced contortion, for pressure with movement is convertible into heat. A line of disturbance passes from the banks of the Wye south of Builth, through the north part of the coal-field south of Llandeilo, and from thence westward into Pembrokeshire, where masses of igneous rocks appear in contact with the coal-field. In connection with this, it may be that the rocks of the coal-field remained a long time highly heated, and so, by a species of distillation, deep under ground, the bituminous were converted into anthracite coals.

FIG. 27.



1. Old Red Sandstone.
2. Carboniferous Limestone.
3. Millstone Grit.
4. Coal measures with beds of coal.

} Carboniferous series.

Dean Forest may be looked on as an outlier of the South Wales coal-field. Fig. 27 may be supposed to represent the arrangement of the strata on the east side of this very perfect basin. The limestone is about 700