

relations of these have not yet been clearly ascertained; they are situated in a line with the Billingsley coal-field above described, and only a few miles distant.

### Section III.

#### *Great South-western Coal District.*

This division is assumed as including the three following principal coal-fields, viz. the grand South Welsh basin, the forest of Dean basin, and that of South Gloucester and Somerset, together with some smaller basins adjacent to the two last, which may be considered (if the figure may be allowed) as satellites attendant on them.

All these coal-basins are closely related and connected with each other by contiguity of position, by resting on a common base of old red sandstone, and by the general analogies of their structure throughout: their strata near the edges of the basins are often very highly inclined, and are partially covered and concealed on the south-east side of the great basin of South Wales, and throughout a great portion of that of South Gloucester and Somerset, by horizontal depositions of more recent formation, consisting of the calcareo-magnesian conglomerate, sandstone, and marle of the newer sandstone formation, and of lias; in many instances in Somersetshire the shafts are begun in lias and sunk completely through the newer sandstone to the coal-measures. Some of these extend to the enormous depth of 200 fathoms: within the Somersetshire coal-field even the lower members of the oolite series appear forming the summits of Dundry and other hills, the coal-measures being exposed and worked in vallies of denudation below; and at one point a shaft has been driven even from these rocks to the coal.

In the very important and extensive coal districts comprised under the present article, the several members which have been enumerated in the beginning of our observations on the coal-fields as associated in them, are displayed on the most striking and satisfactory scale; and it is here perhaps that their relations may be most advantageously studied, especially those of the older red sandstone, its distinction from the newer, and the position occupied by both with relation to the coal: here also we see the utter impossibility of considering them in the light under which Mr. Jameson has regarded them as members of one great formation, with which beds of limestone and coal are accidentally associated; since here, and indeed throughout England, these rocks are entirely unconformable in their position,