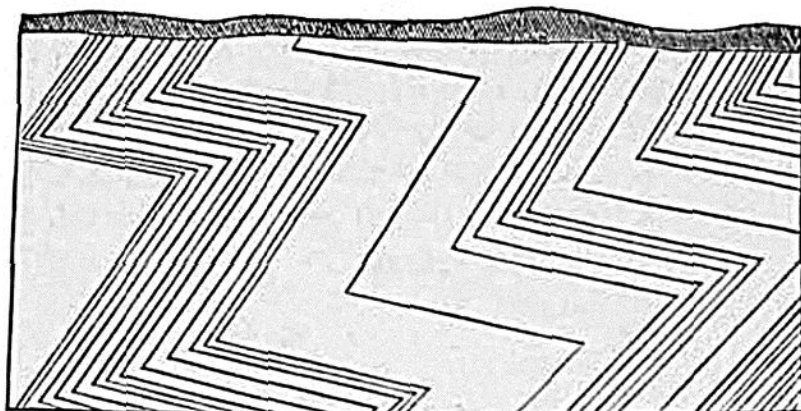


vegetable remains, are curved again and again, and even folded into the form of the letter Z; so that the same continuous layer of coal is cut through several times in the same perpendicular shaft. Thus, in the coal-field near Mons, in Belgium, these zigzag bendings are repeated four

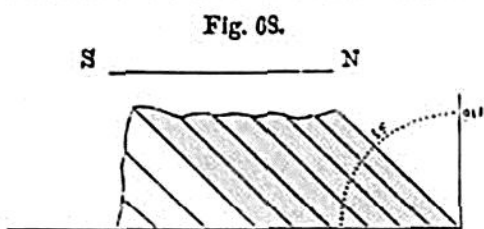
Fig. 67.



Zigzag flexures of coal near Mons.

or five times, in the manner represented in fig. 67, the black lines representing seams of coal.\*

*Dip and strike.*—In the above remarks, several technical terms have been used, such as *dip*, the *unconformable position* of strata, and the *anticlinal* and *synclinal* lines, which, as well as the *strike* of the beds, I shall now explain. If a stratum or bed of rock, instead of being quite level, be inclined to one side, it is said to *dip*; the point of the compass to which it is inclined is called the *point of dip*, and the degree of deviation from a level or horizontal line is called *the amount of dip*, or *the angle of dip*.



Thus, in the annexed diagram (fig. 68), a series of strata are inclined, and they dip to the north at an angle of forty-five degrees. The *strike*, or *line of bearing*, is the prolongation or extension of the strata

in a direction *at right angles* to the dip; and hence it is sometimes called the *direction* of the strata. Thus, in the above instance of strata dipping to the north, their strike must necessarily be east and west. We have borrowed the word from the German geologists, *streichen* signifying to extend, to have a certain direction. Dip and strike may be aptly illustrated by a row of houses running east and west, the long ridge of the roof representing the strike of the stratum of slates, which dip on one side to the north, and on the other to the south.

A stratum which is horizontal, or quite level in all directions, has neither dip nor strike.

It is always important for the geologist, who is endeavoring to comprehend the structure of a country, to learn how the beds dip in every part of the district; but it requires some practice to avoid being occasionally deceived, both as to the point of dip and the amount of it.

\* See plan by M. Chevalier, Burat's D'Aubuisson, tom. ii. p. 334.