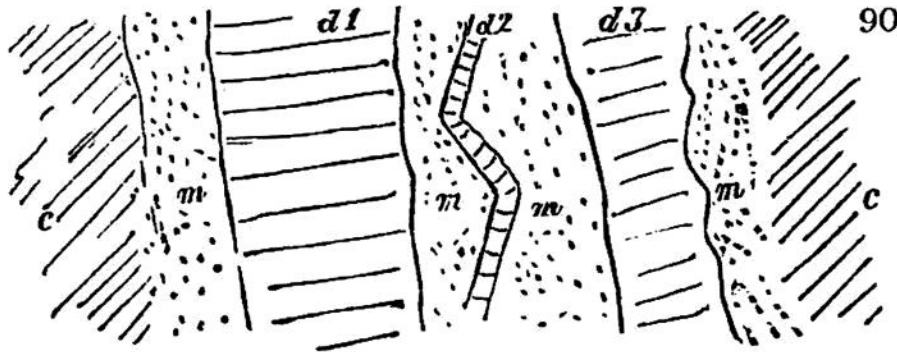


to the two outer dykes, and through the whole of the masses included between them and the central one.

The following diagram, copied from Mr. Conybeare's section (*Geological Transactions*, vol. i. pl. 10.), will be useful for reference. It represents the ground plan of the dykes as they appear on the shore.



d 1. Dyke, 35 feet wide.
d 3. Dyke, 20 feet wide.
m. Granular marble.

d 2. Dyke, 1 foot wide.
c. Chalk.

One of the most direct objections to that part of the Huttonian system of geology in which the induration of rocks is attributed to the action of heat, was drawn from the calcareous strata, which, it was said, would have parted with their carbonic acid, and thereby have ceased to be limestone. That such an effect would take place in the open air, in the ordinary state of limestone (not perfectly dry), is a matter of invariable experience; but Dr. Hutton, with his accustomed sagacity, proposed the hypothesis that the carbonic acid gas would not be liberated by *heat under great pressure*, such as the weight of the ocean pressing on its bed. This hypothesis, sir J. Hall, with equal sagacity, put to the test of accurate and conclusive experiments. In the breech of a gun-barrel he placed an earthen tube half filled with calcareous matter in powder, and strongly compressed, the rest of the space being filled with powdered silica. The tube was then closed hermetically by a mixture of fusible metal. The end of the barrel where the powdered earth was, being heated in a furnace, a part of the fusible metal yielded to the heat, and came