

valuable stone so extensively used for furnaces, fire-places, aqueducts, etc., under the name of *soapstone* or *freestone*.

5. *Hornblende schist*.—Hornblende predominates in this rock, but its varieties contain feldspar, quartz, and mica. When it is pure hornblende, its stratification is often indistinct, and it passes, by taking feldspar into its composition, into a rock resembling greenstone. It occurs in every part of the Azoic system; but its most common associations are argillaceous slate, mica schist and gneiss; into which it passes by insensible gradations.

6. *Quartz rock*.—This rock is essentially composed of quartz, either granular or arenaceous. The varieties result from the intermixture of mica, feldspar, talc, hornblende, or clay slate. In these compound varieties the stratification is remarkably regular; but in pure granular quartz it is often difficult to discover the planes of stratification. It is interstratified with every one of the azoic rocks.

The arenaceous varieties of this rock form good *firestones*; that is stones capable of sustaining powerful heat. Some varieties of mica schist are still better. Gneiss of an arenaceous composition is also employed; as are several varieties of sandstone of different ages. The firestone of the English green sand is a fine siliceous sand cemented by limestone.

7. *Clay slate* or *argillaceous slate*.—This is a fine-grained fissile, highly indurated rock, splitting into plates by cleavage, altogether independent of the original laminæ. This superinduced structure may often be distinguished from the strata, by means of parallel bands of different colors and textures traversing the rock. It is generally a dull blue, grey, green, or black color, sometimes brick red, sometimes striped, sometimes mottled. This rock is best developed in the Cambrian series.

Novaculite or honestone is a compact variety of clay slate, which is highly prized for hones. It is less divided by cleavage planes, and has a very soft and smooth feel.

8. *Serpentine*. The description of this rock as a mineral embraces all that is needful to say of it in this place. We need, therefore, only refer to page 51.

II. PALÆOZOIC SYSTEM.

The Palæozoic rocks, or those in which the oldest forms of life are found, embrace deposits of vast thickness. They are