times, these fragments are united by crystalline matter of a different nature, forming the paste or cement, which holds them together; at other times, the paste is composed of nearly or quite the same materials with the fragments, but in a state of much finer division, and at other times there is little interposed cement.

But many of the rocks of this class are most palpably fragmentary, and the fragments are of all sizes, from those that are scarcely visible to the naked eye, to those whose dimensions are measured by inches and even by feet.

Instances.

The brecciated marble of the Potomac, employed in the public buildings at Washington, is a remarkably firm rock, composed of angular and ovoidal pebbles, the latter of which have evidently, received their shape from friction in water. The cement is a more minutely divided substance of the same kind, but calcareous matter is not exclusively the material either of the pebbles or of the cement.

The fragmentary rocks of Rhode Island, extending by Providence to Boston, and which are very conspicuous in Dorchester, Roxbury, Brooklyn, and other neighboring towns, are fine examples of early formations of this kind. They are very interesting five miles east of Newport, at a place called Purgatory, where a large mass of the rock separated by the natural seams which are found in it, running parallel for a great distance, and cutting the pebbles in two, has fallen out, having been undermined by the sea, whose waves, when impelled by storms, break and roar frightfully in this deep chasm.

The pebbles are here chiefly quartz—they are ovoidal in form and of every size from that of a birds egg to that of a common keg, and they lie generally with their transverse diameters parallel.

The pebbles of the fragmentary rocks about Boston are very various in their composition, obviously however the ruins chiefly of primitive rocks. The pebbles, which there lie in the roads and fields have proceeded from the disintegration of this pudding stone.

The great sandstone deposit of the valley of the Connecticut presents every variety in the size and form of the parts that have been broken up from previous rocks,—transported—more or less rolled, and cemented into rock again.

In East Haven, near New Haven, the rocks often contain massy pebbles of granite, gneiss—mica slate and clay slate, and of the individual minerals of which they are composed. Water worn-pebbles are in some places as common in these rocks as on the sea shore: