the atmosphere was overcharged, they became fitted to hold in solution a larger quantity of lime.

The sedimentary strata, setting aside all other exogenous, purely mechanical deposits of sand or detritus, are as follows:

Schist, of the lower and upper transition rock, composing the silurian and devonian formations; from the lower silurian strata, which were once termed cambrian, to the upper strata of the old red sandstone or devonian formation, immediately in contact with the mountain limestone.

Carboniferous deposits:

Limestones imbedded in the transition and carboniferous formations; zechstein, muschelkalk, Jura formation and chalk, also that portion of the tertiary formation which is not included in sandstone and conglomerate.

Travertine, fresh-water limestone, and silicious concretions of hot springs, formations which have not been produced under the pressure of a large body of sea water, but almost in immediate contact with the atmosphere, as in shallow marshes and streams.

Infusorial deposits: geognostical phenomena, whose great importance in proving the influence of organic activity in the formation of the solid part of the earth's crust was first discovered at a recent period by my highly-gifted friend and fellow-traveler, Ehrenberg.

If, in this short and superficial view of the mineral constituents of the earth's crust, I do not place immediately after the simple sedimentary rocks the conglomerates and sandstone formations which have also been deposited as sedimentary strata from liquids, and which have been imbedded alternately with schist and limestone, it is only because they contain, together with the detritus of eruptive and sedimentary rocks, also the detritus of gneiss, mica slate, and other metamorphic masses. The obscure process of this metamorphism, and the action it produces, must therefore compose the third class of the fundamental forms of rock.

Endogenous or erupted rocks (granite, porphyry, and melaphyre) produce, as I have already frequently remarked, not only dynamical, shaking, upheaving actions, either vertically or laterally displacing the strata, but they also occasion changes in their chemical composition as well as in the nature of their internal structure; new rocks being thus formed, as gneiss, mica slate, and granular limestone (Carrara and Parian marble). The old silurian or devonian transition schists, the belemnitic limestone of Tarantaise, and the dull gray cal-