

again so as to cover them, and fill up their rents with new precipitates.

Werner's original scheme of classification of the rocks of the earth's crust had at least the merit of clearness and simplicity. Though he borrowed his order of sequence partly from Lehmann and Füchsel, he worked it into a scheme of his own regarding the origin of the rocks and their successive production from a universal ocean. Tracing in the arrangement of the rocks of the earth's crust the history of an original oceanic envelope, finding in the masses of granite, gneiss, and mica-schist the earliest precipitations from that ocean, and recognising the successive alterations in the constitution of the water as witnessed by the series of geological formations, Werner launched upon the world a bold conception which might well fascinate many a listener to whom the laws of chemistry and physics, even as then understood, were but little known. Unfortunately the conception was based entirely on the imagination, and had no real foundation in observation or experiment.

Werner adopted the leading ideas of his system in an early part of his career when his personal experience was extremely limited. And having once adopted them, he maintained them to the last. His methodical mind demanded some hypothesis that would allow him to group, in definite and genetic connection, all the facts then known regarding the structure of the earth's crust. His first sketch of a classification of rocks shows by its meagreness how slender at that time was his practical acquaintance with rocks in the field. The whole of the Primitive formations enumerated