Minerals, simple, apparent paucity of, 221. Difficulty

in classing them, 221.

Mitscherlich, his law of isomorphism, 127. His experiments on the expansion of substances by heat, 183.

Motion, 66. Simplicity and precision of the laws of, 134.

Nature, laws of, 28. Immutability of, 32. Harmony of, and advantage of studying them, 33. Prove the impossibility of attaining the declared object of the alchemist. How they serve mankind generally, 33. Illustrated by mining, 34. Economy denied from a knowledge of, 49. How to be regarded, 76, 77.

Nature, objects of, an enumeration and nomenclature of, useful in the study of, 101.

Mechanism of, on too large or too small a scale to be immediately cognisable by our

senses, 143.

Newton, his proof of Galileo's laws of gravitation by an experiment with a hollow glass pendulum, 160. His foundation to hydrodynamical science, 136. Fixes the division between statics and dynamics, 168. His investigation of the law of equilibrium of elastic fluids, 173. His law of hydrostatics, 174. His foundation of hydrodynamics, 177. His analysis of sound, 185. Hypothesis of light, 188. Examination of a soap-bubble, 190. His hypothesis of fits of easy transmission and reflection. combination of **1**90. His mathematical skill with physical research, 203. His Principia, 204. His successors; his geometry, 204.

Nomenclature, importance of, to science, 102. More a consequence than a cause of extended knowledge, 103. Prejudicial to mineralogy, 104.

Norman, Robert, his discovery of the dip of the needle, 246. Numerical precision, necessity

of, in science, 91.

Objects, and their mutual actions, subjects of contem-

plation, 88.

Observation, a means of acquiring experience, 58. Passive and active, 58. Recorded observation, 90. Necessity of, to acquire precise physical data, 161. Illustrated by the barometer, 162.

Oërsted, his discoveries in electricity and magnetism, 99. Of electro-magnetism, 255.

Opacity, 142.

Otto von Guericke of Magdeburgh, his invention of the air-pump, 173.

Paracelsus, power of his chemical remedies; his use of mercury, opium and tartar, 84.

Pascal, his crucial instances proving the weight of air, 172.

Pendulum, 95.

Phenomena, analysis of, illustrated by musical sounds, the sensation of taste, 65. The ultimate and inward process of nature in the production of, 65. Analysis of complex phenomena, 67. Ultimate phenomena, 68. How the analysis of, is use-