42; how to obtain a distinct idea of it, | ib. 47.

Stratified rocks, 39.

Stream works, 297.

Structure of rocks, 38.

- Sub-Apennine strata, remarkable fossil remains in, 245, 246; singular intermixture of animal remains in part of these strata, 246.
- Submarine volcanoes, 142; near Iceland, ib.
- Submersion of coal strata, 342, 343; of the Wealden beds, 198.
- Sublerranean fire, granitic mountains owe their elevation to it, 68.
- Succession, or superposition of rocks, remarks on, 150.
- Sulphur, not a constituent part of rocks except in the form of sulphuric acid, 33.
- Supercretaceous, a term improperly given to the tertiary strata, 215.
- Superposition, 41; whenever similar beds occur together, they lie in the same order of superposition, *ib*.

Swallow holes, 92. Swilleys, or small coal basins, 112.

т.

- Tables of the rocks in which vegetable organic remains occur, 27; of the internal structure of rocks, 38; of the secondary formations, 158; of oolite and lias strata in the Bath district and in Yorkshire, 188; of the secondary strata of Germany, 189; of the Wealden beds, 197; of the American lakes, 216; of the Paris basin, 218; of the strata at Alpnach, 225; of the rocks in which different metallic ores are generally found, 298; of the temperature of thermal waters, 378.
- Tabular, or in large plates, 39; structure of rocks, 40.
- and magnesian limestone, by Professor Sedgwick, 167.
- Talc, resembles mica in appearance, 35; plates flexible, not elastic, *ib.*; is infusible, *ib.*; supplies the place of mica in most of the granite of Mont Blanc, *ib*.
- Talcous slate, structure laminated, 74; saponaceous and sectile, *ib.*; nearly allied to chlorite slate, *ib*.
- Tarentaise, gypsum of, 175.
- Temperature of the earth, 3, 28, 115, (Chap. XXIV.) 357; proofs of its having been higher at a former epoch, *ib.*; supposed causes of, 358; Mr. Lyell's theory of, 359; difficulty of explaining its former high temperature by astronomical causes, *ib.*; temperature of Artesian wells, 362; of mines. See Appendix.

- Teneriffe, Peak of, eruptions from, 258. Tertiary strata, the lower or more ancient formations described, Chap. XVI.; of England and the Paris basin, table of, 217, 218; description of, *ib.*—233; more recent tertiary or quaternary, Chap. XVII.; in various parts of France, 239—244; sub-Apennine strata, 245; upper freshwater strata of Eningen, 246.
- Thermal waters and hot springs probably derive their heat from subterranean fire, 361; thermal waters of England, &c., table of their temperature, 378; of the Alps, 379.
- Tilgate Forest, conglomerate of, 193; Mr. Mantell's discoveries in, 194.
- Toadstone of Derbyshire, 294; alternates with the metalliferous limestone, ib.
- Tournal, M., his opinion respecting human bones found in caves, 306.
- Tow, or combustible clay in coal mines, 104.
- Trachyte, 133, 280.
- Transition limestone, 87, 88-97; singular contorted beds of, 88.
- rocks (Chap. VII.) 82; the lowest rocks in which fossil animal or vegetable remains are found, *ib.*; the principal repositories of metallic ores, *ib.*
- Transportation of loose stones and blocks of granite and other rocks to distant countries, 312, 354; instances of, in our own island, 314, 354.
- Trap rocks, 66; composition of, 80; varieties of, 128-131; passage of into granite, 131; various phenomena presented by them, 133-145; ages of, 147; formation of, 145; varieties of, 129-131.
- Traumate, or greywacke, 86.
- Trebra, M., his observations on the formation of ores, 295.
- Trilobite, 22; peculiar to transition rocks, 99.

Troubles in coal-fields, 107.

Truttenberg copper mine, the deepest in the world, 287.

Tufa, calcareous, 325.

- ----- volcanic, 272; beds of, formed of comminuted trachyte, 280.
- Turtle, fossil remains of, 194.

U. and V.

Valc of Thames, section of explained, 221.

- Valley of les Echelles, 221.
- Valleys, longitudinal and transversal, 50; theories of their formation, Chap. XXIII.; many valleys in the Alps were formerly lakes, 347; valleys of elevation, of disruption, of subsidence, 348; of erosion, *ib.*; original valleys,