232, in the Isle of Wight, 233, 234; marine and freshwater animals of great size, singular intermixture of their remains at Castello Arquata, 247.

Marl, composed of calcareous earth and clay, 32; its use in agriculture, 324. Mastodon, skeletons of, in North America, 332; believed by the Indians not to be extinct, 307, 332; teeth of, found at Alpnach, 225; a cut of, ib.; found in the Andes, ib.; in Norfolk crag, 236

Matlock High Tor, arched stratification of, 95; a cavern and lake recently discovered in, 302.

Megalosaurus, an enormous fossil lizard, discovered by Dr. Buckland in Stonesfield slate, 194; by Mr. Mantell, in the Wealden beds, ib.

Megatherium, an enormous carnivorous animal, found fossil in America, 332.

Metallic beds, 285; minerals, 284; ores, rocks in which they occur, 298; found in the sands of rivers, 297.

veins, their structure and formation, 286, 295.

Mica, description of, 35.

--- slate, description of, 71: its affinity to slate (clay slate), 73; allied to gneiss, ib.; occurs in Anglesea and in Ireland, and in various alpine districts, ib.; minerals common in mica slate, 74.

Millstone grit, 102.

Mill-stones, or burrh stones, brought from France, 232.

Mines, temperature of. See Appendix. Mississippi, great valley of, contains the largest coal field in the world, 368, 369; structure of, 368.

Mulasse, or soft tertiary sandstone, 220

Molluscous animals, 21, 23.

Monkeys, no fossil remains of, 25, 333.

Mont Blanc, structure and vertical strata of, 59.

— Grenier, in Savoy, fall of, 316.

Morains, piles of stones transported by glaciers, 315.

Mountain chains and ranges, 51, 52.

——limestone, or upper transition limestone, 89, 90; changes in, 92; highly metalliferous, 90, 98; not to be confounded with the calcaire alpin of foreign geologists, 100, mountain limestone of England and Wales, 90—97.

Tanges, elevation of, Chap.

Mountains, table of heights of, 376.

Muschel kalk, a series of calcareous strata between the red sandstone and red marl in France and Germany, wanting in England 164; muschel kalk of Germany, 190.

Muscle-bind, a stratum containing freshwater muscles in the coal strata of Yorkshire and Derbyshire, 113.

Murchison, R. J., his account of the secondary strata of part of Germany, 189; of the freshwater strata of Eningen, 248.

N.

Nagel flue of Switzerland, or sandstone conglomerate, 220.

New red sandstone, probable formation of, 161; lower new red sandstone below magnesian limestone, discovered by Professor Sedgwick, ib.: new red sandstone and marl above magnesian limestone, 162; arrangement of the new red sandstone, where all the beds are fully developed, in the Vosges, 163; middle beds of the new red sandstone, the grès rouge and grès des Vosges of the French geologists, ib.; the upper or variegated red sandstone, the gres bigarre of the French geologists, ib.; muschel kalk in France deposited between the variegated sandstone and the red marl, or marnes irrisées of the French, ib.; red marl, the upper part of the new red sandstone formation in England, ib.; chiefly formed by the decomposition of rocks of trap and sienite, ib.; lower new red sandstone, its arrangement with magnesian limestone, and the upper new red sandstone and marl, given by Professor Sedgwick, 167; red sandstone formation near Whitehaven, 177.

Niagara, Falls of, 216.

Norfolk crag, the most recent of the tertiary beds in England, 235; Mr. S. Woodward's account of, ib.; Mr. Taylor's account of, ib.; rests on London clay, ib.; organic remains in, 236; tooth of a mastodon found in, ib.; a similar formation said to be discovered near Calais, ib.; Brighton cliffs in some parts resemble it, ib.; extent of the crag, 249.

Nottingham sand rock, 166, 212.

0.

Obsidian, 130, 279.

Ocean, depth and saltness of, 4; once covered the present continents, 12, 13. Eningen, freshwater strata of, 248, 249.

Old red sandstone, a variety of greywacke, 126.

Ontario lake, 216.

Octite formation, extent of in England, 183, 184; mineral and fossil characters, 184—186; triple division of the