

in the ligalid beds; the catatherium (recent); the steotherium (found in the Siwalik range of the Himalah); &c. Though most of these animals are found in Tertiary deposits, it would appear that some, such as the megatherium, outlived that era, and continued inhabitants of the globe long after the commencement of the current epoch.

Thoracic, of or pertaining to the thorax or chest.

Thorium, the metallic base of the earth; thorina, 300.

Thorough-bred, in stable language, 370.

Thrashing and thrashing-machines, 496.

Thrushes, in Zoology, 148; as sea-birds, 639.

Thunder and lightning; thunder storms, 48.

Tides, causes and character of, 80.

Tight-lacing, evils arising from, 716.

Tobacco-pipes, manufacture of, 327.

Tops, principles and modes of conducting, 483.

Topography, a term applied by geologists to strata suddenly and abruptly thrown, at a high angle, out of their original horizontal position.

Tone, measurement of, 14.

Tin, in Chemistry, 301; in Metallurgy, 380.

Tinical, the India name for crude borax, 566.

Tinctures (Lat. *tinctio*, dye), in Medicine, 754.

Titanium, one of the metallic elements, 302.

Toads, family of (*Bufonidae*), 156.

Tobacco-pipes, manufacture of, 327.

Tops, natural, 367; artificial, 333.

Top-dressing, practice of, in Agriculture, 603.

Topography, (Gr. *topos*, a place), a description of places, a sub-branch of geographical science.

Torpedo, in Zoology, 160; in Electricity, 272.

Tortoise, land and water, 153.

Touch, sense of, physiologically considered, 123.

Tourniquet, in Surgery, 764.

Toxicology, a treatise on poisons, or the science which takes cognisance of them.

Trade-winds, causes and character of, 39.

Trailing, a mode of fishing for mackerel, 708.

Tramways, the original of our modern railways, 411.

Transept, in Gothic architecture, 459.

Transition formation, in Geology, 23-24.

Transparent (Lat. *trans*, through, *pareo*, I appear). Objects which permit light to pass, or be seen through them, are transparent. Glass is a familiar example. See Diaphanous.

Trass (Dutch), in hydraulic cements, 334.

Travertine (a corruption of the word *tiburinus*), in Geology, a calcareous incrustation, deposited by water holding carbonate of lime in solution. It is abundantly formed by the river Anio at Tiber near Rome, at St. Vignone in Tuscany, and in other parts of Italy. It collects with great rapidity, and becomes sufficiently compact in a few years to form a light durable building stone. Its lightness renders it especially suitable for arches and other structures where weight of material is objectionable; and for this reason, it has been used in the construction of the cupola of St. Peter's. The deposition of travertine at the baths of San Filippo, is employed in the manufacture of medallions in baso-relievo; often of considerable beauty.

Trawling and trawl-net, in fisheries, 701.

Trees, their physiology and culture, 361-376.

Trellises, construction of, in Floriculture, 541.

Trenching, advantages of, in Agriculture, 502, 505.

Trepang of the Chinese, 187.

Trepanning, in Surgery, an operation by which the skull is perforated in order to raise a portion that has been depressed by external injury.

Trilobites, fossil crustaceans, figured and described, 24.

Tripoli slate, animal composition of, 166; natural history and uses of, 368.

Trituration (Lat. *tero*, I rub down), in Chemistry, 307.

Troches or lozenges, a solid form of medicine, 755.

Trolling, a species of angling, 684.

Trout, in Zoology, 138; in Angling, 683.

Truffle, a genus of esculent fungi or mushrooms, 112.

Tubercles, in Anatomy, small round suppurative tu-

mours, such as those affecting the lungs in Consumption; the adjectives *tubercular*, *radicular*, and *radicose*, are applied, in medicine and botanical language, to denote the presence of knobs or growths shaped like tubers.

Tufa, in Mineralogy, a porous volcanic product containing much earthy matter. It is formed either by the aggregation of loose volcanic dust or cinders, cemented by water, or by the consolidation of mud thrown out by volcanoes. Tufaceous pertaining to tufa, or having the aspect of tufa.

Tungsten, one of the metallic elements, 302.

Tunicata, the lowest class of mollusca, 184.

Turban, a loose, light Oriental head-dress, 774.

Turbinated, in conchology, a term applied to any shell wreathed spirally from a broad base to a narrowed apex; turbinite, a fossil turbinated shell; turbinolia, a fossil turbinite.

Turbith mineral, yellow precipitate sulphate of mercury.

Turf, the sporting phrase for horse-racing, 370.

Turkeys, in Zoology, 149; domesticated, 634.

Turnips, field, 494; garden, 320; in L. *ary*, 727.

Turnpikes, the name given to the toll-gates on the public roads, the ancient gate being a mere pole-pike. The turnpike roads are formed under acts of parliament, and managed by commissioners and trustees under whom are appointed surveyors and contractors. The tolls collected at the tolls or gates are exclusively devoted to the construction and maintenance of the lines upon which they are levied; but are now, since the introduction of railways, found in many instances to be inadequate to that purpose; so that a new system of road management is imperatively called for. See Roads, p. 406-409.

Turtles, in Zoology, 153; in Dietary, 731.

Tympanum, the drum of the ear, or strong partition dividing the outer from the inner parts of that organ. In Animal Physiology, 123.

Type and stereotype metal, composition of, 302, 381.

Typhus, a dangerous species of continued fever of a contagious nature, and marked by a tendency in the system to putrefaction; *typhoid*, partaking of the nature of typhus.

Ultramarine, azure-stone or lapis-lazuli; also the pigment prepared from that stone, 368.

Umbelliferae, plants bearing their flowers in umbels, like the hemlock, 100.

Unconformable, in geology, a term applied to strata lying in a different plane from those on which they rest. Thus, suppose a suite of strata dipping at an angle of 45° to be overlaid by another suite quite horizontal, then the latter would be said to be unconformable with the former. Unconformability is always a proof of the subjacent strata being much older than those above them, and also of their having been tilted out of their original horizontal position before the deposition of the superjacent suite.

Uranium, one of the metallic elements, 302.

Uranography, delineation of the heavens, 8-10.

Uranus or *Herschel*, primary planet, described, 5.

Urside (Lat. *ursus*, a bear), the bear family, 133.

Urticaceae, Urticaceous plants or Nettle-works, 107.

Uvula, a small dependent body at the back of the mouth, familiarly called the pap of the throat, useful as a valve or defence to the windpipe and gullet.

Vaccination (Lat. *vaca*, a cow), the operation of introducing cow-pox matter into the human body, in order, by producing a greatly mitigated disease, to preserve the system against natural small-pox, which rarely occurs twice in one person. From noticing that cow-milkers were strangely free from liability to small-pox, Dr. Jenner discovered the invaluable secret, that certain pustules on the udders of cows possessed the property described.

Vacuum, a space named as being void or vacant, but always containing in reality some amount of highly-rarefied air even under the most powerful air-pump.