

ANALYTICAL INDEX

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FOREIGN TOPOGRAPHY AND ANTIQUITIES.

Large table with three columns: Engravings, Engravings, Engravings. Topics include Africa, South, description of a settler's cabin in, ii. 292; Corfu, diet of the inhabitants of, ii. 315; Crete, labyrinth of, v. 278; etc.

ILLUSTRATIONS OF THE PEOPLE OF DIFFERENT PERIODS AND COUNTRIES.

Table with three columns: Engravings, Engravings, Engravings. Topics include Abruzzi, shepherds of, ii. 106; African colonists of South, and settler's hut, ii. 22, 292; Albanian and Greek costumes, v. 179, 187, 221; etc.

ZOOLOGY, WITH INCIDENTAL NOTICES OF ANIMALS.

Table with 4 columns: Engravings., Engravings., Engravings., Engravings. Topics include: Adjutant, or gigantic crane, voracity of, iii. 4 141; Age of sheep, means of ascertaining, i. 128; Animal sagacity, i. 3; Animals, domestication of, i. 44; concord of, 357; Animals, on the presentation which they have of changes in the weather, v. 263, 264; Antelope, the springer, natural history of, v. 193; Hunting the springbok at the Cape of Good Hope, v. 193; Aunts, fecundity and use of in Brazil, i. 238; Araucari, curl-crested, description of, iii. 105 105; Bat, the kalong, description of, iii. 306... 305; Bat, mode of flying, ii. 12; Bats, habits of, v. 407; Bear carrying a dead horse, i. 4; Beavers, with their huts, ii. 129; Bee management, improved system of, iii. 11; Bees in Russia and Portugal, on the management of, iv. 190; Birds, affection of, v. 64; Birds of Paradise, description of, ii. 82... 81; Birds, swarms of insects devoured by, ii. 279; Birds' Nests, v. 306; Pencil nests of the oriole, 305; Bison, natural history of, iii. 273... 273; Bison Americanus—a bull, iv. 338... 338; Females—a bull in the distance, 339; Black-cap, the, ii. 216; Boa constrictor, natural history of, i. 289; Boa constrictor about to strike a rabbit; Attack of a boa constrictor on a sleeping Lascar, iii. 393; Boar hunting, wild, ii. 397; Brahmin bull, i. 44; British Birds, Slaney's outline of, i. 258; Caemhrie goat, account of the, ii. 361... 361; Camel, the Arabian, description of, ii. 116 116; Cape buffalo, account of, i. 137... 137; Capelin, description of the, ii. 135; Capereauzie, or cock of the wood, iv. 321... 321; Cassowary, description of the, ii. 376... 376; Cereopsis of New Holland, v. 367... 368; Chaja, the, or crested screamer, v. 511; Chaja and young, 512; Chamois, account of the, ii. 449... 449; Chetah, or hunting leopard, descriptive sketch of, iii. 31... 32; Chevrotain, the, v. 473... 473; Chimpanzee, the, natural history of, v. 57... 57; Chlamyphorus truncatus, description of, iii. 49... 49; Cobra capella, i. 236... 236; Coipas, the, natural history of, v. 20; The Coipas, 20; Hairy palate of the coipas, 21; Condor, account of the, ii. 183... 184; Cormorant-fishing in China, iv. 76... 76; Cow, Yorkshire, i. 73... 73; Cow-martingale of Normandy, v. 232... 232; Crocodile, method of killing, i. 89... 89; Cuttle-fish, natural history of the, iii. 324... 324; Suckers of the cuttle-fish, 324; Dodo, account of the, ii. 209... 209; Relics of, iii. 4; Dog, anecdotes of a, v. 354; Dogs of St. Bernard, child preserved by, ii. 45; Dogs used in smuggling, iii. 195; wild, in

BOTANICAL PRODUCTIONS.

Table with 4 columns: Allspice tree, account of, iii. 282... 281; Bamboo, great utility of the, ii. 61... 61; Uses to which it is applied, iv. 486; Banana, account of the, i. 252... 252; Banian tree, description of the, i. 184... 184; Bay tree, account of, iii. 314... 313; Betel-nut tree, v. 23... 23; Bread-fruit tree, account of, i. 333... 333; Bread-fruit, flower, and leaf, 333; Jaca, or bread-fruit tree, description of, iii. 433... 433; Butter, account of, i. 73; different methods of making, iv. 274; Cabbage tree, the, v. 327... 328; Cocoa, best mode of preparing for use, iii. 138; tree, account of, 116; Fruit, 117; Cacao bean, 117; Calabash tree, description of, iii. 416... 416; Camphor tree, description of the, ii. 144... 144; Account of, iv. 486; Castor-oil plant, the, v. 65... 65; Chestnut tree, the gigantic, of Mount Etna, ii. 135... 136; Chestnuts, manner of clearing them from the husk in Savoy, iii. 244; Cinnamon and cassia, iii. 112; Cinnamon tree, products of the, ii. 402; Cocoa, account of the, ii. 119... 120; Coffee, cultivation and preparation of, i. 49 49; Cotton, natural history of, i. 156; Common cotton plant, 156; Tree cotton, 156; Shrubby cotton, 156; Pod, 157; Cow tree of America, v. 166... 168; Date-palm, descriptive account of the, iv. 473... 473; Dragon tree, account of, i. 352... 352; Flower garden for June, i. 112; Forests in Sweden, conflagrations incidental to, ii. 243; Gooseberries, cultivation of in the north of England, iii. 314; Hemp, cultivation of, ii. 319... 320; Hops, historical notice of, and mode of cultivating, iv. 452; Hop-garden, 452; India-rubber, account of, i. 242; Trees producing caoutchouc, 216; Lichens, brilliancy of some species of, ii. 279; Lotus, the Egyptian, description of, iii. 217... 217; Mahogany tree, account of the, i. 107... 107; Trucking mahogany, 108; Manmee tree, description of, iii. 268... 268; Leaf, flower, and fruit, 269; Mango tree, description of, iii. 81... 81; Manna tree, process of obtaining the gum from, iii. 204... 204; Maple tree, process of extracting sugar from, iv. 137... 137; Maple sugar making, v. 475; Oak-bark peeling, account of, iv. 36... 36; Oil plant of China, account of, iv. 496; Orange trees, account of, iv. 177... 177; Opium, qualities and use of, iii. 397; Olive tree, account of, i. 185... 185; Fruit, 187; Papyrus, account of the, i. 309... 309; Pita plant, the, v. 182; Plants, fecundity of, i. 246; Potatoes, history and analysis of, v. 66, 67; Pulque, preparation and use of, ii. 440; The agave, 440; Rhubarb, natural history of, v. 119; Sea-weed banks, prodigious growth of, ii. 278; Shaddock tree, account of, iv. 201... 201; Smut-balls, or dust-brand, ii. 126, 180; Smut-balls, 126; The smut in barley, 180; The smut in oats, 181; The smut in wheat, 181; Sponge, mode of diving for, iii. 27; Sugar, account of, i. 25... 25; Talipot tree of Ceylon, ii. 257... 257; Tamarind tree, notice of, iii. 97... 97; Tea, account of, i. 33... 33; on the consumption of, and mode of cultivating and preparing in China, i. 33; iv. 445; The tea-plant, i. 33; Chinese gathering tea, 33; Teazle, the, i. 160... 160; Upas tree, the, ii. 321... 321; Vine, the, its cultivation in the Tyrol, ii. 267; importance of the cultivation of, in France, 233, 240; cultivation of, in the Deccan, v. 151; the, and vineyards, v. 97; Chambery, Savoy, vineyards of, v. 97; Vines, manner of cultivating the, in Savoy, iii. 247; Vintage, Redding's remarks on the, ii. 41; of Castile, v. 66; the, history of, v. 177; Wine-making at Pola, 177; Violet, various colours and uses of the, ii. 173

GEOLOGY AND MINERALS.

Table with 4 columns: Antimony, description of, iv. 387; Arsenic, description of, iv. 416; Cannel Coat, meaning of the term, v. 347; COAL, in England, geological situation of, ii. 427; origin of, 450; Diagrams of, 427; Map showing the geological position and commercial distribution of coal in England, ii. 477; Fossil plant, 451; Fossil tree at Craigleith quarry, 451; Map of the coal-field of South Wales, 502; Coals, Walls-end, v. 398; Cornwall, mines in, on the system of contracts pursued at, iii. 500; Copper, description of, iv. 5, 18; Cobalt, description of, iv. 415; Chromium, description of, iv. 416; Elephant, fossil remains of, in New Holland, i. 274; Elk, fossil, of Ireland, account of, iv. 299; Horns and Skull, 300; Gold, description of, iv. 110, 142, 160, 179; Iguanodon, the fossil, ii. 27... 28; Lead, description of, iv. 74, 94; Manganese, description of, iv. 415; Mercury, iv. 279, 311; platinum, 330; zinc, 367; antimony and bismuth, 387; manganese, cobalt, arsenic, and chromium, 415, 416; Megatherium, account of, i. 180; Skeleton of, 180; Mercury, description of, iv. 279, 311; Mining district of South Staffordshire, description of, v. 157, 158; MINERAL KINGDOM:—Great Britain, ii. 10; outline of geological system, 19; rocks, 58, 86, 149, 154; animals classified, 101; organic remains, 178, 221, 244, 347, 362, 387, 394; Order of succession of the different layers of rocks which compose the crust of the earth, ii. 21; Fossil shells, 244; Skeleton of Ichthyosaurus, 348; Skeleton of Plesiosaurus, 348; restored, 349; Mineral Kingdom; general account of the metals, iii. 331; iron-ore, 387; method of obtaining the metal from clay ironstone, 396; different methods of smelting iron, 402; copper-ores, 482; copper-mines of Cornwall, 502; Mines in Cornwall, on the system of contracts pursued at, iii. 500; Minerals, natural affinity of vegetables with, ii. 176; Mineral waters, natural and artificial, ii. 211; Mineral Kingdom: copper, iv. 5, 18; Mines of Cornwall and Wales, notes of a journey to, iv. 351; Monomania in horses, curious facts relating to, iv. 312; Organic remains, principal species of, ii. 409; Organic remains restored, 409; Platina, description of, iv. 330; Silver, description of, iv. 205, 238, 261; Slate, its applicability for pavements, iii. 95; Tin, description of, iv. 33, 55, 58; Zinc, description of, iv. 367

ASTRONOMY.

Table with 4 columns: Astronomy, on the study of, i. 167; Comets, No. 1, Littrow's calculations on, i. 283; further remarks on, 291; Eclipse of the sun, i. 158; Greenwich, account of the observatory at, ii. 308... 308; Halley's Comet, observations on, iv. 360; Course of the comet among the fixed stars, 360; Moon, astronomical appearances of the, ii. 236; Moon, her motions described, ii. 262; her influence on the weather, ii. 270; calculations relative to the, ii. 286; Telescopic appearance of the moon, 236; Map of the moon, 237; Four diagrams, 263, 264; Motion, on the principles of, i. 346, 358; Mercury, notice of the transit of, 47, 82; Observatory, a public one suggested for London, 371

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INDEX TO VOLUME V.

- ADDRESS to the Readers of the 'Penny Magazine' on the completion of its fifth volume, 513.
- Ague, cure of, by charms, 203.
- Alfred, Bruce, and Washington compared, 29, 54.
- Alnwick Castle, Northumberland, history of, 37.
- Alps, the peasantry of the, 201.
- Analogies, natural, essays on, 199, 207.
- Anchor, the forging of the, lines on, 39.
- Anglo-Saxons, trades and mechanical arts of, 91.
- Animals, presentation of, on changes of weather, 263.
- Antelope, the Springer, account of, 193.
- Antiquarian enthusiasm, anecdote, 408.
- Apprentices, Institutions for, 503.
- Arch of Trajan at Benevento, 489.
- Artizans, diseases of, 22.
- Athlone, description and history of, 68.
- BAIRD, Sir David, anecdote of, and Lieut. Lucas, at Seringapatam, 192.
- Barbarism and civilization, progress from one to the other, 411.
- Barcelona, port and city of, history of, 145.
- Bats, habits of, 407.
- Bavaria, the Walhalla, or Hall of Heroes in, description of, 265.
- Beaumaris Castle, Anglesey, 51.
- Betel Nut Tree, natural history of, 25.
- Bills of Mortality, history of, 142.
- Birds' Nests, account of, 305.
- Birds, affection of, 64.
- Birmingham, ancient and modern, historical and descriptive account of, 41, 81.
- Blind, instruction of the, 387.
- Books, ancient, form and material of, 310.
- Boston church and town, description of, 385.
- Bread, wheat, notice on, 74.
- Bridal gift, the, a tale, 163.
- Brindley and the Duke of Bridgewater's canal, 363.
- Britain, poetic address to, 192.
- British Museum, history of the, 350, 364, 391, 395.
- manufactures among the Indians of South America, 451.
- Bruce, Robert, life of, 62.
- Bull frog, the, of America, account of, 319.
- Byland Abbey, Yorkshire, history of, 353.
- CABBAGE-TREE, the, natural history of, 327.
- Cabot, Sebastian, life of, 79.
- Cairo, Ibrahim Pasha's palace at, 17.
- Cambridge, ancient and modern, with origin of universities and colleges, 168, 209.
- Canada, original colonization of, 248.
- Canadian Indians, account of, 23.
- Cannel Coal, meaning of the term, 347.
- Castile, Old, view and description of a village in, 452.
- Castor oil plant, natural history of, 65.
- Catalepsy, a case of, 187.
- Celandine, lines to the small, by Wordsworth, 71.
- Cemeteries, ornamental, decking graves with flowers, 153.
- Cercopsis of New Holland, the, natural history of, 367.
- Chaja, the, natural history of, 511.
- Chartres Cathedral, history of, 113.
- Chess, history and literature of, 408.
- players, village of, 496.
- Chest, the, capacity of, and condition during bodily exertion, 279.
- , deformities of the, 307.
- Chester, ancient and modern, historical and descriptive account of, 121.
- Cheviot Hills, the, 141.
- Chevrotain, the, natural history of, 473.
- Chichester Market Cross, account of, with a notice of the city, 369.
- Chillon, castle of, descriptive account of, 60.
- Chimpanzee, the, natural history of, 57.
- China, fruits of, 50; vegetable products of, 60; silk worms and silk, 77, 120; agriculture, gardening, &c., of, 419, 434, 460, 477, 485.
- Chinese, a brief captivity amongst the, 314.
- , intellectual progress of, 285.
- Claude Lorraine, curious anecdote respecting, 447.
- Cleland Testimonial, the Glasgow, 147.
- Clermont and the Auvergne Mountains, 134.
- Cobham Hall, description of, 260.
- Coffers-dams, as used in bridge building, 271.
- Coins, English, history of, with illustrations, 275, 283, 292, 324.
- Coipus, the natural history of, 20.
- Contentment, on, 160.
- Corfe Castle, Dorsetshire, account of, 477.
- Cornwall, remarkable rocks in, 28.
- , labouring classes of, description of manners and customs of, 196.
- , Well of St. Keyne, and Southey's ballad on, 204.
- Cottages, Mountain, 96.
- Cow martingale of Normandy, 232.
- Cow Tree of America, 167.
- Cretan or Wallachian Sheep, account of, 497.
- Crete, the Labyrinth of, description of, 278.
- Crime in England, Statistics of, 359.
- "Cui Bono," explanation of, 96.
- Crushed bones as manure, 403.
- DANCING, an essay on, 1.
- Deity, remark on, from Bishop Hall, 184.
- Denmark, labourers in, 40.
- Desires, immoderate, 150.
- Dog, anecdotes of a, 354.
- Donald Caird, Sir Walter Scott's song of, 502.
- Dryburgh Suspension Bridge, account of, 416.
- Duel, a remarkable, 31.
- Dunluce Castle, Antrim, history of, 105.
- Dyeing cloth of two colours, 269.
- EASBY ABBEY, in Yorkshire, description of, 313.
- Egypt, ancient, arts of, 237.
- , modern, some account of, 427.
- , adventures in, 438.
- Elizabeth Castle, Jersey, history of, 76.
- Employments, division of, 240.
- English history, has been the history of progress, 104.
- FACTORY LABOUR, 30.
- First attempts, 192.
- Fox and Crow, fable of, 283.
- Fribourg Suspension Bridge, with notices of suspension bridges, 308, 317.
- Friends and Associates, a maxim of Burke's, 3.
- Fuel, consumption of, in France and England, 462.
- GENEVA, state of the fine arts in, 240.
- Giraffe, natural history of the, 234.
- Grecian and Albanian Costumes, with sketches of national character, 178, 187, 220.
- Greek Theatre, Syracuse, with a sketch of the Greek Drama, 231.
- Gumb, Daniel, a remarkable character, 179.
- HALL, Bishop, his advice how to live, 184.
- Hamilton and Townley collections, 403.
- Heidelberg, view of, and description, 421.
- Hclena, St., description of, 108.
- Hemlock or cromlech stone, near Nottingham, 277.
- Herefordshire customs, 430.
- Heritable qualities, 32.
- Hip-joint, disease of the, 496.
- Hoopoe, the, natural history of, 33.
- Horse-foed, on, an essay, 94.
- Horses in Italy, 64.
- , on the biting of, 159.
- Hot water, efficacy of, 352.
- Howden Church, description of, 133.
- Hutton, William, some account of his life, 445, 453, 458, 493, 499.
- IBEX, the, account of, 157.
- Igel, Roman monument at, 92.
- Indian ink, 392.
- Ivan, the Tsar, a fragment of Russian history, 370.
- JAMAICA, a sugar-farm in, history and statistics of, 348.
- KINKAJOU, the, natural history of, 137.
- Knights of Malta, history of the, 205, 226, 245, 261, 270.
- Knowledge, attractions and advantages of, 232.
- , hints and cautions in the pursuit of, 335.
- LABRADOR MISSIONARIES, extraordinary narrative of, 146.
- Lakes, the, season for visiting, 208.
- Laon, cathedral of, description of, 139.
- Lead-mine visit to a, 8.
- Lead-mines in Britain worked by the Romans, 503.
- Lemur, ruffed, natural history of, 4.
- Leyden, university of, 12.
- Licence to eat flesh, 258.
- Light, theories of, 95.
- Lincoln's Inn, custom in, 104.
- Lion and other animals, a fable, 164.
- Literary forgeries, 375.
- London and Greenwich Railway, 9.
- London in times past and present, 366.
- MAGNESIAN BREAD, 150.
- Malmesbury Market Cross, 101.
- Malting, description of the process, 39.
- Maple sugar-making, 476.
- Matlock High Tor, description of, 321.
- Medical evidence, remarks on, 290.
- Miners in England and Mexico, condition of, 16.
- , manners of the northern coal, 243.
- , narrative of a remarkable deliverance of, 267.
- Mining district of South Staffordshire, 157.
- Moscow, notice of, 22.
- Mummies, from 'Egyptian Antiquities,' 106.
- Munich, sculpture gallery of, description of, 236; the Pinacothek, or picture gallery of, 244.
- NATIONAL GALLERY, the, with notices of foreign galleries, and progress of fine arts, 466.
- Negroes, how they were estimated by our ancestors, 456.
- Newcastle upon Tyne, "Pants" in, 404; castle of, 426.
- Newspapers, English and American, 155.
- Niagara, Falls of, visit to the, 405.
- Nibelungen Lay, the, account of, 410, 433, 449.
- Nilc, the River, 135.
- Norway, scenery of, 217.
- Norwegian Fiords, description of, 393.
- peasantry, manners, customs, &c., of, 333.
- peasantry, habits, manners of, &c., 356.
- OBERHASLI, pass of, in Switzerland, description of, 258.
- Occupations, variety of, 203.
- Ocelot, the, natural history of, 225.
- Origin of butterflies, a fable, 3.
- Owl, the ear of, 56.
- PARIS, l'Arc de Triomphe de l'Etoile, 389.
- La Bourse, 401.
- La Madeleine, church of, 412.
- Halle aux Blés et Farines, 431.
- Views on the Seine, 464, 492.
- Halle aux Vins, 505.
- Palermo, cave of Santa Rosalia near, account of, 444.
- account of the city of, 361.
- Panther, the American, 413.
- Paper, printing, and cheap newspaper trades of the seventeenth century, 110.
- Patagonian Penguin, the, account of, 417.
- Pawnbroking Establishments, statistics of, 423.
- Penal Laws, and their moral effects, 71.
- Pesth, city of, account of, 436.
- Petra, amphitheatre at, 162; temple at, with general description, 185.
- Pheasants, natural history of the, 329.
- Physician, choice of a, 70.
- Pickering fishing, account of, 442.
- Pilgrimages of the middle Ages, 228.
- Pilgrimage to Mariazell, in Austria, 345.
- Pita Plant, the, account of, 182.
- Plague, the, at Eyam, in Derbyshire, 53.
- Pleasures, corporeal and intellectual, 346.
- Plymouth Breakwater, with notices of other breakwaters, 222.
- Polecat, or Skunk, of North America, 295.
- Political economy of our ancestors, essays on, 130, 148, 164, 190.
- Porcupine, the, natural history of, 441.
- Potatoes, natural history of, 66.
- Prison discipline, with an account of Mrs. Tatnall's efforts in Warwick gaol, 182.
- Prisons of Scotland, account of, 487.
- Proteus Anguinus, the, account of, 151.
- Provender for the Vultures, a fable, by Dr. Johnson, 483.
- Public Instruction, 150.
- Purple and scarlet dyes of the ancients, 194.
- RED AND GREY FOXES, with a peculiar method of trapping them, 398.
- Rhubarb, description of, 119.
- Rievaulx, Abbey of, history of the, in Yorkshire, 241.
- Ruff and Reeve, the, natural history of, 73.
- SALT-WORKS at Goza, near Malta, curious account of, 326.
- Savings' Banks, Metropolitan, account of, 406.
- Sea, the, 19.
- Scamen's Hospital ship, the "Dreadnought," description of, 402.
- Siamese Narration of a Shipwreck, 223, 231.
- Sidmouth, town of, account of, 447.
- Signs, essay on, their origin, uses, &c., 103.
- Silk manufacture, account of the, 414.
- Squirrels in fixed cages, 360.
- Stanton Drew, druidical remains at, 115.
- Stanton Harcourt, ancient kitchen at, 144.
- , remarkable event at, 159.
- Steam Engine, the, 35.
- Steam Navigation, 35.
- Spinning, description of the different processes of household, 268.
- Stars, shooting, some account of, 331.
- , remarks on, 440.
- Stockholm, city of, account of, 501.
- Storms, remarkable, in England, 490.
- Stuttgard, city of, account of, 457.
- Swallows, migration of, 202.
- Swiss Husbandry, 150.
- Swimming and Diving, feats of, 290.
- Superstition in Africa, 112.
- TALLOW-TREE of China, 7.
- Talkativeness, 11.
- Tanning, description of, 118.
- Tar-making, description of, 49.
- Taste, cultivation of the popular, 479.
- , improvement of, in the decoration of houses, 434.
- Temper, a kind and gentle, lines by Hannah More, 150.
- Templars, knights, history of, 15, 17.
- Tentonic and Scandinavian Romances, —the Nibelungen Lay, 410.
- Threshing-machines, 235.
- Tinkers of Scotland, account of, 502.
- Townley, Charles, life of, 391.
- Tower of London, historical and descriptive account of, 249, 297.
- Trogons, the, natural history of, 287.
- Troughton, Mr., anecdote of, 187.
- Tutbury Castle, history of, 89.
- UMBRELLAS, history of, 4.
- Unanimity in crowds, 8.
- Unprofitable discussions, 8.
- Upsala, city of, description of, 373.
- Usefulness, maxim of Feltham, 8.
- VALOUR, a maxim, 11.
- Varnish-tree of China, 11.
- Vicissitude, remark on, 187.
- Vicugna, the, natural history of, 271.
- Vine and vineyards, the, history of, 97.
- , 177.
- Vine, cultivation of the, in the East Indies, 151.
- , importance of the cultivation of, in France, 238.
- Vintage of Castile, 266.
- Virgil's Tomb, near Naples, 332.
- WAR, remark on, 36.
- Washington, life of, 70.
- Watchmaking in Switzerland, account of, 322.
- Westfjorddalen, Valley of, in Norway, 217.
- Whale fishery on the coast of Ireland, 40.
- Wheaten Bread, on, 74.
- Wheel, high, the, 138.
- Wheels, different kinds of household, 268.
- Wight, Isle of, historical and descriptive account of, 337, 377.
- , etymology of places in, 395.
- Winchelsea, Sussex, description and history of, 399.
- Winchester Market Cross, description of, 295.
- Wine of the Greek Islands, 8.
- Winter, escape from, lines on, 416.
- Wolf and Crane, a fable, 129.
- Working Men, meaning of the phrase, 235.
- Writing materials, 13.

LIST OF ILLUSTRATIONS.

- | | | | |
|---|--|--|--|
| 1 DANCING, FROM HOGARTH'S 'ANALYSIS OF BEAUTY,' page 1. | 48 Port and City of Barcelona, 145. | 86 Pass of Oberhasli, 257. | 133 British Museum, Room I.—No. 52, 397. |
| 2 Ruffed Lemur, 4. | 49 Cleland Testimonial, 148. | 87 Cobham Hall, 260. | 134 British Museum, Room III.—Nos. 28, 397. |
| 3 Skull of Lemur, 4. | 50 Proteus Anguinus, half the natural size, 152. | 88 The Walballa, 265. | 135 The Strand Gate, Winchelsea, 400. |
| 4 Skull of Monkey, 5. | 51 Churchyard at Wirfin, Valley of Salza, 153. | 89 The Jersey Wheel, 268. | 136 La Bourse, 401. |
| 5 London and Greenwich Railway, from near Bermondsey New Church, 9. | 52 The Ibex, 157. | 90 A Hindoo Woman spinning Cotton Yarn on the primitive Wheel of India, 268. | 137 "Paut," in Front of the Freeman's Hospital, Newcastle-upon-Tyne, 404. |
| 6 The University at Leyden, 12. | 53 Amphitheatre at Petra, 161. | 91 Hargreave's Spinning Jenny in its most improved form, 269. | 138 Frescoes of the Nibelungen, 409. |
| 7 Palace of Ibrahim Pasha, as seen from the River Nile, 17. | 54 The Lion and other Animals, 164. | 92 The Vicugna, 272. | 139 Church of La Madeleine, 412. |
| 8 The Coïpus, 20. | 55 Pericarp and Nut of the Palo de Vaca, or Cow-Tree of Venezuela, of the natural size, 168. | 93 Cofferdam for carrying on the repair of Blackfriars' Bridge, 273. | 140 Plan of the Suspension Bridge erected at Dryburgh in 1817, 416. |
| 9 Hairy Palate of the Coïpus, 21. | 56 Interior of King's College Chapel, 169. | 94 English Coins (figs. 1 to 21), 275. | 141 Suspension Bridge erected at Dryburgh in 1818, 416. |
| 10 Papoues, 24. | 57 Bridge connecting the Colleges of Old and New St. John's, 173. | 95 Greek Theatre, Syracuse, 281. | 142 Patagonian Penguins, 417. |
| 11 Betel-Nut Tree, 25. | 58 Wine-making at Pola, 177. | 96 English Coins (figs. 22 to 46), 283. | 143 View of Heidelberg from the Ruins of the Castle, 421. |
| 12 The Checsewing, as seen from the North-west, 28. | 59 Albanian Officer, 180. | 97 Trogons, 288. | 144 Chapel in Newcastle Castle, 425. |
| 13 Kilmarth Rocks, as seen from the South-east, 28. | 60 Janissary of Janina, 180. | 98 Fox and Crow, 289. | 145 Shops in a Street of Cairo, 428. |
| 14 Trevelly Stone, 29. | 61 Greek Officer of Nauplia, or Napoli di Romania, 181. | 99 English Coins (figs. 47 to 67), 293. | 146 Men of the Lower Classes of Cairo, 429. |
| 15 Hoopoe, 33. | 62 Temple at Petra, 185. | 100 Winchester Market Cross, 296. | 147 An Egyptian Schoolboy learning the Alphabet, 429. |
| 16 Alnwick Castle, Northumberland, 37. | 63 Woman of the Island of Casas or Thasos, 188. | 101 Queen Elizabeth's Armoury, 297. | 148 Siegfried taking leave of Chrimhild, from the Frescoes of the Nibelungen, 433. |
| 17 View of Ancient Birmingham, 41. | 64 Woman of Trikeri, in Thessaly, 189. | 102 Gun raised from the Wreck of the Royal George, 300. | 149 View of Pesth, in Hungary, 437. |
| 18 Modern View of Birmingham, 45. | 65 Hunting the Spring-Bok at the Cape of Good Hope, 193. | 103 Cornice of the Small-arms Armoury, 300. | 150 The Porcupine, 441. |
| 19 Staffordshire Colliers, 48. | 66 Cornish Fisherwomen, from the neighbourhood of Mount's Bay, 196. | 104 Gateway of the Bloody Tower, 301. | 151 Interior of St. Rosalia, 444. |
| 20 Tar-making, 49. | 67 Alpine Peasants returning home, 201. | 105 Pensile Nests of the Oriole, 305. | 152 View of Chit Rock, Sidmouth, 448. |
| 21 Beaunaris Castle, 52. | 68 Well of St. Keyne, Cornwall, 204. | 106 Fribourg Suspension Bridge, 309. | 153 Chrimhild discovering the dead body of Siegfried, from the Frescoes of the Nibelungen, 449. |
| 22 Ear of the Owl, and a Feather of the Bill magnified, 56. | 69 Caius Gate of Honour, Cambridge, 209. | 107 Writing Materials and Implements, 312. | 154 Village of Villa Vellid, in Old Castile, 452. |
| 23 Chimpanzée, 57. | 70 The Pepsian Library, Magdalen College, Cambridge, 212. | 108 Easby Abbey, Richmond, Yorkshire, 313. | 155 View of the City of Stuttgart, 457. |
| 24 Castle of Chillon, from the Lake, 61. | 71 Valley of Westfjordalen, 217. | 109 Fribourg Suspension Bridge (figs. 1 to 6), 317. | 156 Wood-Yard and Raft on the Seine, Faubourg St. Antoine, 464. |
| 25 Castor-Oil Plant, 65. | 72 Woman of Castri, the ancient Delphi, 220. | 110 The Bull-Frog, 320. | 157 National Gallery, with the proposed Improvements in front, 465. |
| 26 North Gate, Athlone, Leinster, 68. | 73 Greek Bride in Bridal Costume, 220. | 111 The High Tor at Matloek, 321. | 158 Plan of the National Gallery, 469. |
| 27 The Ruff and Reeve, 73. | 74 Wife of an Archon (Athens), 221. | 112 English Coins (figs. 35 to 69), 324. | 159 Interior of Antwerp Cathedral, with the Picture of the Pescent from the Cross, by Rubens, 472. |
| 28 Elizabeth Castle, Jersey, 76. | 75 The Ooclot, 225. | 113 The Cabbage-Tree, 328. | 160 The Chevrotain, 473. |
| 29 Trinity Chapel, Birmingham, 81. | 76 Scallop Shell of the Pilgrims, 228. | 114 The Horned Pheasant, 328. | 161 Corfe Castle, Dorsetshire, 477. |
| 30 New Street, do., 85. | 77 The "Cow-Martingale," 232. | 115 Virgil's Tomb, 332. | 162 Windmill at Chesterton, Warwickshire, 480. |
| 31 Interior of Tutbury Castle-Yard, 89. | 78 Giraffes in the Zoological Gardens, with one of the Keepers, 233. | 116 View of Alum Bay, 337. | 163 Halle aux Blés et Farines, 481. |
| 32 Roman Monument at Igel, near Treves, 93. | 79 Sculpture Gallery, Munich, 236. | 117 View of Black-Gang Chine, 341. | 164 Canongate Gaol, Edinburgh, 488. |
| 33 Chambery, Savoy, 97. | 80 Arabesque from the Room of the Gods in the Glyptothek, Munich, 237. | 118 Pilgrimage to Mariazell, 345. | 165 Arch of Trajan at Benevento, 489. |
| 34 The Market-Cross at Malmesbury, 101. | 81 The Abbey of Rievaulx, from a Drawing by W. Westall, A.R.A., 241. | 119 A Jamaica Sugar Farm, 348. | 166 Washerwomen on the Seine, Paris, 492. |
| 35 Dunluce Castle, 105. | 82 Picture Gallery, Munich, 244. | 120 Byland Abbey, Yorkshire, from a Drawing by W. Westall, A.R.A., 353. | 167 Cretan or Wallachian Sheep, 497. |
| 36 Island of St. Helena, 109. | 83 Plan of the Upper Story, 245. | 121 Norwegian Peasantry, 356. | 168 City of Stockholm, 501. |
| 37 Porch of Chartres Cathedral, 113. | 84 Byward Tower and Stone Bridge, with drawbridge leading to the Wharf, 249. | 122 The City of Palermo, 361. | 169 Roman Pigs of Lead in the British Museum, 504. |
| 38 Plan of the Druidical Temple at Stanton Drew, 116. | 85 Interior of the Horse Armoury, 253. | 123 Aqueduct over the Irwell, 364. | 170 Halle aux Vins, Paris, 505. |
| 39 Stones at Stanton Drew, 117. | | 124 Cereopsis and Young, from the Zoological Gardens, 368. | 171 Crested Screamer, 512. |
| 40 Old Houses in Chester, 121. | | 125 Chichester Market-Cross, 369. | 172 Vignette to Address, 513. |
| 41 Watergate Street, and external view of the "Rows," 124. | | 126 City of Upsala, 373. | |
| 42 Interior of a Chester "Row," 125. | | 127 Ventnor Cove, 377. | |
| 43 Wolf and Crane, 130. | | 128 Map of the Isle of Wight, 380. | |
| 44 Howden Church, 133. | | 129 Shanklin Chine, 384. | |
| 45 The Kiukajou, 137. | | 130 Boston Church, 385. | |
| 46 West Front of Laon Cathedral, 140. | | 131 L'Arc de Triomphe de l'Etoile, 389. | |
| 47 Ancient Kitchen, 144. | | 132 Salmon Fishery on Lake Söstrand, 393. | |

THE PENNY MAGAZINE

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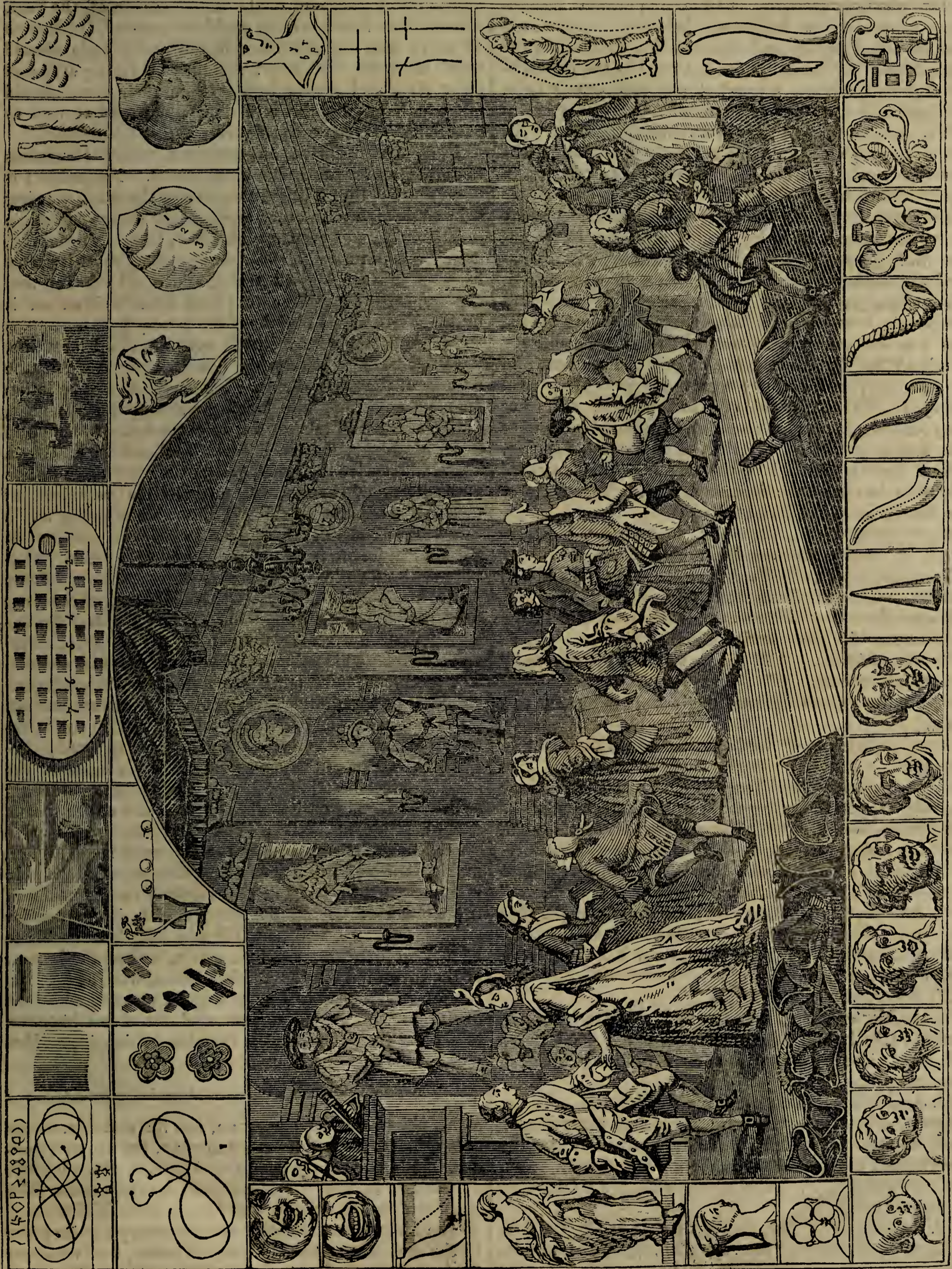
Society for the Diffusion of Useful Knowledge.

241.]

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DANCING.



[Dancing, from Hogarth's 'Analysis of Beauty.']

THE ludicrous engraving at the head of our present Article is taken from one of Hogarth's plates on the 'Analysis of Beauty,' wherein he makes us feel what is

beautiful in form and graceful in position and motion by exhibiting their opposites. The grotesque in dress, the awkwardness of movements, and the unfitness of

people for the things they are about, are put in a strong light in the cotillon scene before us. We can almost hear the flooring of the ball-room creak under the weight of the heavy-footed paunchy old man who is dancing with his three-cornered hat on. And then look at his tall lanky neighbour, whose back is towards us, and whose legs are bent in the fashion of a pair of tongs. And then the man in the forlorn wig setting to that mountain of an old woman who is affecting the graces of youth; and the little old fellow with the double pig-tail prancing before the timid bashful young woman whose hands are held out like the fore-paws of a kangaroo; and then the fine contrast to the whole formed by the couple at the head of the dance,—the dignified though somewhat scornful young lady, and the nobleman, her partner, who looks as graceful as it is possible for one to look in such a costume. All this is fine satire; and by carefully examining the print our readers will discover many other touches of exquisite humour.

Although Hogarth's dance is ridiculous enough, we are by no means of opinion that dancing, in proper time and season, and in the right manner, is an absurdity. Hitherto we have not been a dancing nation. "L'Angleterre," said a Parisian professor, "a produit des grands hommes dans les sciences et les beaux arts, mais pas un grand danseur. Allez lire l'histoire!" (England has produced great men in the sciences and the fine arts, but not one great dancer. Only read history!) We are afraid this is too true, and that many defects in our conduct and national character have arisen out of our neglect of music and dancing. Indeed, that this should be the case is evident to every body that has read the immortal Molière's comedy of 'Le Bourgeois Gentilhomme.'

Music-Master.—"Philosophy, to be sure, is something; but music, my dear Sir, music * * *."

Dancing-Master.—"Music and dancing,—music and dancing,—that's all that's wanted in this world."

Music-Master.—"There is nothing so useful in the government of a great nation as music."

Dancing-Master.—"There is nothing so necessary to mankind as dancing."

Music-Master.—"Without music no government can go on."

Dancing-Master.—"Without dancing a man can do nothing."

Music-Master.—"All the disorders, all the wars we see, only happen because people won't learn music."

Dancing-Master.—"All the misfortunes of mankind,—all the sad reverses that swell the pages of history, the mistakes of politicians, the failures of great captains,—all this comes from not knowing how to dance."

M. Jourdain the Citizen.—"How do you make that out?"

Music-Master.—"Why, doesn't war arise out of a want of unison among men?"

M. Jourdain.—"That's true."

Music-Master.—"If therefore all men learned music wouldn't that be the sure means to make them agree and keep time with one another,—to bring about a universal peace?"

M. Jourdain.—"You are quite right."

Dancing-Master.—"When a man has committed a fault of conduct, either in family matters or in the government of the state, or in the command of an army, don't we always say, 'So-and-so has made a false step in such an affair?'"

M. Jourdain.—"Yes, that's what we say."

Dancing-Master.—"And can making false steps proceed from anything else than the not knowing how to dance?"

M. Jourdain.—"That's very true; and both of you are quite right in what you say."

Dancing-Master.—"We have said it in order to show you the excellence and usefulness of dancing and music."

M. Jourdain.—"And by this time I perfectly well understand it all."

When our readers shall have recovered from their consternation, and ceased to wonder how the affairs of this great nation can possibly have gone on so well as they have done, we will beg their attention to a few facts we have collected in relation to the subject of dancing generally. The triviality of the subject may be excused on account of the festive season of the year, when, if our hearty wishes could be granted, the hearth of every man should burn brightly;—friends should meet from far and near; and bright young eyes and light feet, and hearts lighter than their feet, should make a happy holiday and dance,—at least as well as poor English people can dance.

It is well to give an occasional truce to serious thoughts and work-a-day occupations. No subject is so trivial but that a little research and the art of viewing it in connexion with other and greater things can make it interesting and even useful. But, properly speaking, dancing is not a small subject; the practice of it seems to have prevailed in all times, and in all climes; and the quantity of matter that has been written on it by the French and Italians alone is very great.

"The history of dancing," says an old Florentine, "would be the history of human nature. All the nations of the earth dance. The distinctive appellation for man would be, 'the dancing animal;' for although, at a great cost of labour, we do cause bears to stand on their hind-legs, and teach cocks to dance by putting a hot stone under their feet, yet do they not these things naturally or of themselves; and, in the very best of them, it is not dancing, but a miserable hopping and a throwing about of their legs (*un brutto menare di gambe.*)" There is an old French quarto called "Histoire critique de la Danse depuis la Creation du Monde jusqu' à nos Jours;" or, A Critical History of Dancing from the Creation of the World to our Days. The ingenious author seems frequently to be quite overpowered by the magnitude and importance of his subject. The celebrated musician Pierre Jean Burette published, about a hundred and thirty years ago, a very curious dissertation on the dances of the ancients in the 'Memoirs of the French Academy of Inscriptions.' According to Theophrastus, as quoted by Athenæus, the ancient Greeks attributed the first invention of dancing to one Andron, a native of Catania, a city at the foot of Mount Etna in Sicily; but Eumelus, who is also quoted by Athenæus, carries the art many steps higher, making the god Jupiter the first dancing-master. He is represented figuring in that capacity in the midst of the deities of Olympus. After this it is no wonder Athenæus should say that it is wise and honourable to be a good dancer. Lucian, again, claims the honour of the invention for the goddess Rhea, who, as he says, taught her priests in Phrygia and Crete the whole art of dancing. The oldest poet and the oldest historian of Greece make honourable mention of dancing. Homer speaks of

"Two with whom none could strive in dancerie,"

as his old translator, Chapman, has it; and Herodotus tells us how Hippocles the Athenian, the son of Tisander, lost his bride, the beautiful Agarista, the daughter of Clisthenes, king of Sicyon, by making some false steps in dancing for her.

The king's determination was to marry his daughter to the most distinguished man in Greece, and what was so proper to mark this distinction as dancing? After a year's probation, the different suitors met at supper to decide the business; and, having sacrificed a hundred oxen and drunk plenty of wine, they en-

gaged in a dispute about music and dancing. Hippoclidides bade the musicians "strike up" with a tune called Emmelia, which he danced to, greatly to his own satisfaction, though it should appear from Herodotus that either the air, or the dance, or both, gave little satisfaction to the king. Having finished this dance and taken breath for awhile, Hippoclidides called for a table, on which he danced, in the first place, according to the fashion of the Spartans, and secondly in the Athenian manner: but at length he stood on his head, using his legs as if they had been his arms. He had been offended before, but when his majesty of Sicyon saw his would-be son-in-law capering with his feet in the air, he could contain himself no longer, and exclaiming, "Son of Tisander, you have danced away your wife," he immediately gave the fair Agarista in marriage to Megacles, the son of Alcmaeon, who, as we may suppose, contented himself with dancing on his feet. The decision does credit to the good taste of the old king, but we are inclined to suspect that very ancient dancing, and all dancing among uncivilized people, was little more than tumbling and posture-making, such as we still see occasionally at our country-fairs. In an illuminated Latin bible of the 12th century preserved in the library of the British Museum there is an embellishment representing the daughter of Herodias dancing for the head of St. John the Baptist, and she is represented, like Hippoclidides, balancing herself on her head and hands, with her legs and feet in the air. Mr. Sharon Turner, in his 'History of the Anglo-Saxons,' says, "We may remark that the word commonly used in Anglo-Saxon to express dancing is the verb *Tumbian*. The Anglo-Saxon version of the Gospel mentions that the daughter of Herodias *Tumbude* (*i. e.* tumbled) before Herod; and the Anglo-Saxon word for a dancer is *Tumbupe* (tumbler). It is probable that their mode of dancing included much tumbling."

But to return to the Greeks: in their days of virtue, freedom, and simplicity, dancing was considered an indispensable accomplishment, and the best men of the land danced; nor was it until their manners were corrupted that they conceived the notion that none ought to dance except slaves and hired artists who did it for money. That severe lawgiver Lycurgus even enjoined dancing to the Spartans, as something not only seemly, but honourable and necessary. The gravest statesmen and magistrates of Thessaly never hesitated to join the dance, just as among ourselves, in the days of Queen Elizabeth, My Lord Keeper would open the ball, and all the cabinet-ministers, judges, and the rest of the

"Most potent, grave and reverend signiors,"

would take their part in the dance, without at all thinking that they thereby degraded themselves. In the time of James I. and Charles I. our lawyers were distinguished for their dancing. The author of a book entitled 'The English Dancing-master, or plaine and easie Rules for the Dancing of Country-dances, with the Tune to each Dance,' exclaims with energy, "Who hath not heard of the gentlemen of the Innes of court, whose sweet and airy activity has crowned their grand solemnities with admiration to all spectators?" And in another place he says, "Dancing is a quality that has formerly been honoured in the courts of princes, when performed by the most noble heroes of the times!" This curious book was published in 1651, during the gloomy non-dancing days of Oliver Cromwell, but it was written some time before. The writer, who modestly and perhaps prudently concealed his name, giving only the initials J. P., is thoroughly in earnest about his subject. "The art of dancing," he adds, "called by the ancient Greeks *Orchestice* and *Orchestis*, is a commendable and rare quality fit for young gentlemen if opportunely and civilly used. And PLATO, that famous philosopher

thought it meet that young ingenious children be taught to dance."

It is recorded of the founder of the Grecian stage, the great tragic poet Æschylus, that he did not consider it unworthy of his genius to turn his attention to the national dances, which he eventually improved to a wonderful extent. These old Greeks had religious dances and war-dances, dances for marriages, for funerals, and for a great variety of occasions; and some of these have survived in the land where almost everything else has perished or been changed. At the distance of twenty-six centuries, we can trace the Dædalian or Cretan dance, as described by Homer, in the *Romaika* of the modern Greeks; and the ancient Pyrrhic dance in the *Albanitico* of the present day; as also in another dance peculiar to Candia, in which the performers, who are always men, are furnished each with a target and a short sword, which can differ little in form from those described in the 'Iliad.' It is curious to see such things lasting so long; but, according to one of the old Italian writers we have consulted, there is, or there ought to be, as much immortality in a good dance as in an Epic poem. The historical dances of the ancient Greeks deserve a word of notice; by their means some of their most remarkable tales were handed down to posterity. Each of the tribes at Athens seems to have celebrated in a peculiar dance some historical event with which the forefathers of the tribe had been particularly connected. Pantomimic action and all the play and expression of the countenance must have been mingled with these historical dances, which probably resembled in some points the *ballets d'action* which the modern French, and still more the Italians under Viganò, have carried to such perfection as to make them tell a perfect story without the employment of words, and to render them, with the aid of music, as effective and touching as a fine tragedy.

In ancient Rome dancing went through much the same phases of fortune as in Greece. The hardy simple-minded republicans did not consider that there was either shame or sin in dancing. In the days of the Cincinnati, the Gracchi, the Catos, when their morality was most austere, and their domestic virtues above reproach or suspicion, the children of the senators, and of all the upper classes of citizens, were regularly sent to the dancing-school, where they learned how to make use of the castanets as well as how to dance. But when Rome became a sink of vice and impurity,—when the men ceased to be brave and the women virtuous,—then the practice of dancing was held as base and dishonouring, and a set of panders and hired artists soon rendered it so in reality.

To be continued.]

Friends and Associates.—Those persons who creep into the hearts of most people,—who are chosen as the companions of their softer hours, and their reliefs from care and anxiety,—are never persons of shining qualities nor strong virtues. It is rather the soft green of the soul on which we rest our eyes; that are fatigued with beholding more glaring objects.—*Burke.*

Origin of Butterflies.—When Jupiter and Juno's wedding was solemnized of old, the gods were all invited to the feast, and many noble men besides. Among the rest came Chrysalus, a Persian prince, bravely attended, rich in golden attires, in gay robes, with a majestical presence,—but otherwise an asse. The gods, seeing him come in such pomp and state, rose up to give him place; but Jupiter, perceiving that he was a light, phantastick, idle fellow,—turned him and his proud followers into butterflies and so they continue still (for aught I know to the contrary), roving about in pied coats, and are called *Chrysalides* by the wiser sort of men,—that is, golden outsides; drones, flies, and things of no worth.—*Burton.*

LEMURS.



[Ruffed Lemur.]

IN the island of Madagascar, near as it is to the coast of Africa, which in almost every part offers "a wilderness of monkeys," none of those animals are to be found. This fact is the more remarkable when we consider the latitudinal range through which the multitudinous family of Simiæ is distributed. If, however, this sultry island be untenanted by monkeys, it is supplied, as if to compensate for the deficiency, by a singular group of quadrumanous animals, which may be said to take their place, a group peculiar to Madagascar and two or three small contiguous islands: these are known under the various names of Macaocos, Mongous, Makis, and Madagascar cats. They constitute the genus *Lemur*. The true lemurs constitute a tolerably numerous genus, thirteen distinct species being now acknowledged, of which one, the *Lemur rufifrons*, has been lately made known to science. (See 'Proceedings of Zool. Soc. for 1833,' p. 106.)

There is something in the appearance, habits, and manners of the lemurs very peculiar. Though quadrumanous, like the monkey, the limbs have a contour very dissimilar to what we see in those animals, and indeed neither the fore nor hind-paws are those of a monkey, for the thumb of the fore-paws is short and feeble, while on the hind-paws it is long, and gradually dilates into an expanded flattened tip. The anterior limbs are short and muscular, but the posterior pair are elongated and slender; the body is slender, well turned, much resembling that of a cat: it terminates in a long, full-furred tail; the head is somewhat rounded on the top, but is reduced into a long pointed muzzle; the eyes are large, bright, and evidently adapted for nocturnal vision; the incisor teeth are four above and six below, the latter being long, compressed laterally,

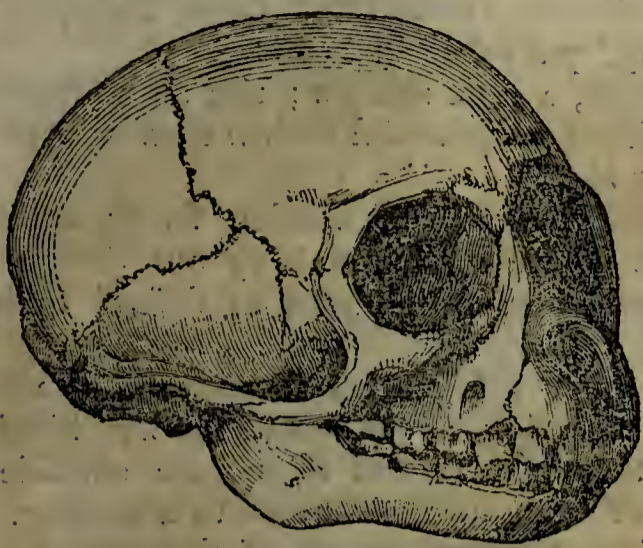
and projecting almost horizontally forwards; the canines are long, pointed, and sharp-edged, especially those of the upper jaw, which are indeed formidable weapons; the grinders have much of the insectivorous character about them, the tubercles along their outer edge being sharp and conical. On examining the skull of the lemur, we find it very different in its general aspect from that of the monkey.



[Skull of Lemur.]

The fur with which the lemurs are clothed is fine, soft, and of a woolly character. In their native woods these animals associate together in troops. After sunset their voices, hoarse and loud, may be often heard in discordant chorus; while anon the troop, dimly seen, comes sweeping through the dark dense foliage, with that sort of progressive motion which we attribute to

the unsubstantial forms of fancy. Hence the generic title lemur, which signifies a ghost.



[Skull of Monkey.]

Wild and savage, they avoid the presence of man, but defend themselves with great obstinacy if attacked or in danger of being captured. When taken young, however, they become easily reconciled to captivity, are usually gentle and familiar, fond of being noticed, and become attached to those who feed and attend to them; but we have known them in moments of anger bite those to whom they were most accustomed, and that with great severity.

The activity of the lemurs is very remarkable. They traverse the trees of the forest, taking long sweeping bounds from branch to branch with the utmost ease and grace; during the hours of twilight they are constantly in motion. They are in fact nocturnal or crepuscular animals, sleeping in their retreats or among the dense foliage during the day, and rousing up as evening steals on to commence their search for food, or to gambol with their fellows. Fruits, insects, reptiles, small birds, and eggs constitute their means of subsistence. Of the habits of these singular creatures in a state of nature much is yet unknown. In captivity they are interesting from the peculiarity of their appearance and manners; yet they are certainly far less intelligent than monkeys, and display but little inquisitiveness or playfulness. They are extremely sensible of cold, and always appear chilly. If allowed to approach a fire they will sit up, spread their hands, half close their eyes, and evince the most marked signs of the pleasure they derive from the increased temperature. At other times they endeavour to maintain a due degree of warmth by folding their long tails round the body, and where two are in the cage together it is very common to see them crouching close to each other, so as to resemble a ball of fur. In this manner they sit on their perch, presenting an odd appearance, for the head is snugly doubled between the arms upon the chest so as not to be visible. Chilly as they are, however, the lemurs, with due care, bear our atmosphere and changes much better than many animals belonging to far less sultry climates.

During the greatest portion of the day, these animals in captivity are crouching on their perch; if roused, they utter a sort of grunting noise, and traverse their cage quickly for a short time. Like parrots, they are fond of having their head stroked or scratched gently, and will press it to the bars of their cage in order that this luxury may be afforded them; they thus frequently solicit it from those with whom they are familiar. It is, however, on the approach of twilight that the lemurs are most alert; they then begin to leap from perch to perch, with their bushy tails raised above the level of the back, and climb along the bars, or pursue each other, uttering incessantly their short grunting note; and occasionally suddenly breaking out into an abrupt

hoarse roar. The roar of the *vari* or *ruffed lemur* is especially deep and sonorous.

The species represented in the sketch is the *vari*, or *ruffed lemur*, one of the largest and most beautiful of the genus. In size it exceeds a cat; its fur is of admirable texture, being full, fine, and silky; the tail is long and bushy. The tasteful arrangement of the large black patches on a pure white ground render it very conspicuous. A full ruff of longer hairs than those on the rest of the body surrounds the face, whence its English appellation. In captivity this species is very gentle, and is easily rendered docile and familiar.

UMBRELLAS.

Our name for the umbrella being obviously taken from the Italian *ombrello*, naturally refers us to Italy as the source from which we have derived that useful article. If we had obtained it intermediately from France we would, doubtless, have taken with it the French name of *parapluie*, which in the present use of the implement is a more expressive and proper name than that of *ombrello*, which signifies "a little shade," and refers to the original use as a defence against the sun, rather than to its present use as a shelter from the rain. There seems no doubt that the umbrella was first introduced into Italy from the East, and from thence found its way into the other countries of Europe. It seems also that the applicability of the instrument as a defence from rain was quite an afterthought, and that it was originally, as in the East, only used to protect the person from the rays of the sun. In the course of my inquiries into this subject I thought of looking into the 'Vocabolario degli Accademici della Crusca,' 1733, and was gratified to find that its definitions confirmed the impressions I had been led to entertain. The 'ombrello' is defined as an instrument to keep off the sun, also called a parasol.* Mention is also made of a functionary whose employment it was to carry an umbrella for great personages,† being quite an oriental use of the instrument. Before this time, however, perhaps long before, the umbrella had come to be used as a shelter from rain; for it said further down that "ombrello" is also the name of an instrument similar to the former, used for keeping off rain.‡ So then, early in the last century, and probably a good while before, the present uses of the umbrella and parasol were known in Italy.

But all this was known also in England, even earlier than the date of the above quotations from the great Italian dictionary; and it is this which I am desirous of showing, because it is generally believed that its introduction is very recent. Indeed, I did myself not long since entertain the general impression that the use of this convenient article had been introduced by Jonas Hanway, somewhere about the middle of the last century; and the statements which Dr. Cleland gives as to its introduction into Edinburgh and Glasgow would also convey the notion that the umbrella first began to be known about that time in these cities. Speaking of Glasgow, the 'Statistical Account of Glasgow' says:—

"About the year 1781 or 1782, the late Mr. John Jamieson, surgeon, returning from Paris brought an umbrella with him, which was the first seen in this city. The doctor, who was a man of humour, took great pleasure in relating to me how he was stared at with

* "Ombrello.—Strumento per parare il sole, al quale diciamo anche parasole."

† "Ombrelliere si dice altresì colui che porta l'ombrello per servizio de' gran personaggi."

‡ "Ombrello si dice anche uno strumento simile che si usa per parar l'acqua,"

his umbrella. For a number of years there were few used in Glasgow, and these were made of glazed cotton cloth. Now every child at school, mechanic, and servant, is provided with an umbrella."

In a note to this Dr. Cleland quotes the following from Creech's 'Edinburgh Fugitive Pieces':—"In 1763 there was no such thing known or used as an umbrella, but an eminent surgeon of Edinburgh who had occasion to walk a good deal in the course of his business, used one about the year 1780; and in 1783 umbrellas were much used, and continue to be so, and many umbrella warehouses are opened, and a considerable trade carried on in this article. The fashion is spread through Scotland."

If these two statements are to be understood literally, that umbrellas were not at all known or used in Edinburgh until about 1780, after they had so long been used by the women of London, where also, by that time, they had come into extensive use among men, the fact is very extraordinary, and would serve to show how little intercourse then subsisted between our great towns. And why introduce from *Paris* what was then well known and much used in *London*? We cannot help thinking that the two surgeons of Glasgow were merely the first *men* who used umbrellas in those places. If not so, the gentlemen began in Scotland what commenced with the ladies in England.

My suspicions about the accuracy of the impressions I had received on this subject were awakened by observing that Johnson in his 'Dictionary' illustrates the word "umbrella" by quotations from Dryden and Gay. On further inquiry I have been enabled to find umbrellas mentioned in an author earlier than Dryden, and in such a way as to imply that the article was then at least well known, if not in common use. Sir William Davenant in an 'Entertainment,' composed of songs and declamations, performed at Rutland House in the reign of Charles I., introduces a Parisian and Londoner respectively satirizing each other's capitals. The former, among other things, says,—“Sure your ancestors contrived your narrow streets in the days of wheel-barrows, before those greater engines, carts, were invented. Is your climate so hot that as you walk you need *umbrellas* of tiles to intercept the sun*??" It would seem from this, however, that at this time the only use of umbrellas was to keep off the rays of the sun. The passage from Dryden I cannot at this moment find in the original. As quoted by Johnson, it is:—

“I can carry your umbrella, and fan your ladyship.”

Gay's 'Trivia, or Art of Walking the Streets of London,' was published in 1712, the very year in which Hanway was born. It has a very distinct notice on the subject, showing that the umbrella was then commonly used by females in rainy weather. The following is the passage, given more fully than as quoted by Johnson. It is headed, 'Implements proper for Female Walkers':—

“Good housewives all the winter's rage despise,
Defended by the riding-hood's disguise;
Or underneath th' umbrella's oily shed,
Safe through the wet in clinking pattens tread.
Let Persian dames th' umbrella's ribs display
To guard their beauties from the sunny ray;
Or sweating slaves support the shady load,
When eastern monarchs show their state abroad;
Britain in winter only knows its aid,
To guard from chilly show'rs the walking maid.”

The statements which I have made in the former article about 'Umbrellas in the East' will have shown that the line about the use of umbrellas by the "Persian dames" is quite a mistake. The Persian women have nothing to do with umbrellas or parasols, but when they go out envelope their persons, face and all,

* Works of Sir William Davenant, 1673.

in a great sheet. The passage shows, however, that umbrellas had at this time come to be used, by women only, as a shelter from the rain. This is further shown by the following definitions from Bailey's 'English Dictionary,' published in 1736:—

“*Umbella*, a little shadow; also an umbrella, a bon-grace; also a screen which women wear over their heads to shadow them.

“*Umbrello*, a sort of wooden frame covered with cloth, put over a window to keep out the sun; also a screen carried over the head to defend from sun or rain.”

From other information it appears also that *men* who had occasion to go out in the wet hired a sedan chair, if they could afford it, or wore suitable articles of dress, or made up their minds to a wetting. We do not consider the importance of the umbrella to us in equalizing the business of daily life. Before it came into use among men rainy weather must have been a far more serious affair than at present, and must have given a greater interruption to the pursuits of men in towns. Few people *now* are prevented from any business or engagement by rain. Wet weather is now only used as an excuse by females and invalids for non-attendance to business or the neglect of an engagement. But formerly it was otherwise, and is so still in countries where the umbrella is not in use. No man liked to go abroad who could not afford to ride, or who had not some very serious business to transact, or indispensable engagement to attend. Hence the streets were much more deserted in wet weather than at present.

It is curious to compare the condition of our grandfathers before umbrella-times with that which our own would be if some sumptuary law, the extinction of whalebone, or some other cause, were suddenly to deprive us of our umbrellas. On our side we have clean and well-paved streets, free from the obstructions with which they were formerly crowded, so that a man with a tolerable stock of wind might have a pretty clear and clean run through the rain. Then there are India-rubber cloaks or capes, which would doubtless come into general use were there no umbrellas; and, though last not least, there are the omnibuses, which in such a state of things would, in consequence of the increased demand, be immensely multiplied, at low fares for short distances, and would be started on the second and third rate lines of road, instead of being confined to the principal as now. This on our side. Now, as to our grandfathers, they were not a running generation; and if they had been such, the wretched condition of the streets would not have allowed them to run; and, in fact, they would otherwise have had less occasion to do so than ourselves.

The upper stories of houses and pent-house roofs projecting over the foot-path in the less fashionable, and therefore the walking, parts of London and other towns, afforded to pedestrians a tolerably continuous shelter near the wall, and they had only to scamper as best they could across such unprotected intervals as now and then occurred. At the worst, it gave them the certainty that they should always find places where they could wait until the violence of a shower had subsided. The loss of time which this involved would now be regarded as a serious evil, but time was in those times considered a much less precious commodity than at present. That this was a common resource appears from the frequency with which heroes and heroines and other personages encounter each other in such situations in the tales and novels of the time; and perhaps we may adduce, as another illustration, Johnson's saying concerning Burke:—"If a man were to go by chance at the same time with Burke under a shed to shun a shower, he would say, 'This is an extraordinary man.'"

It is not unlikely that the want of a portable shelter may have given a longer continuance to this mode of building than it would otherwise have obtained; and it would be curious to calculate whether any and what degree of influence the introduction of umbrellas into common use may have had in causing the old style of domestic architecture to disappear.

I now come to Jonas Hanway; for although that admirable person cannot, as we have seen, claim the merit of having introduced the umbrella, his name is importantly connected with its English history. His biographer, Pugh, says simply that he was the first man who used an umbrella, and this was the truth: he was the first *man*, but it was used by women long before. Pugh gives no explanations, but no doubt he intended an emphasis on the word *man*, as distinctive from woman. His readers, however, finding no statements regarding its previous use failed to distinguish the emphatic sense of the expression, and considered it equivalent to saying that Hanway was the first *person* by whom an umbrella was carried in this country. Hence the common impression as to the recency of its introduction. There is little doubt that Jonas, like the gentlemen at Glasgow and Edinburgh, took the hint from the French; and he must have been a bold man who, in such a town as London, first ventured abroad with a convenience which had previously been appropriated to females. What a silly and effeminate jack-anapes that enduring and adventurous traveller must have been considered. The rain, from which he was sheltered, while others were exposed to it, must have fortunately operated in rendering less dense the mob by which he would have been followed under other circumstances. Yet, no doubt, many urchins and idle fellows scampered through the wet to see the wonder and hoot the wonder-maker, while less daring persons were content to run to their doors and stretch their necks out of the windows to witness the shocking effeminacy into which man had fallen. Londoners wonder less at any thing now than they did at that time; still a sensation of a similar sort would be occasioned if a man were now to walk the streets with a parasol in sunshiny weather, or with a muff in cold; yet the umbrella in its origin was thus used by men, and muffs were in use among men in this country a century ago.

In concluding this notice I cannot refrain from transcribing Pugh's picture of Hanway's personal appearance in the streets. It is exquisite in its way; and now that I have fallen on that word I may say that Jonas himself—"plain," "honest," "truth-telling" Jonas Hanway—seems to have been somewhat more of an *exquisite* than the ideas usually associated with his name would have prepared me to expect. Look on this picture:—

"In his dress, as far as was consistent with his ideas of health and ease, he accommodated himself to the prevailing fashion. As it was frequently necessary for him to appear in polite circles on unexpected occasions, he usually wore dress-clothes, with a large French bag. His hat, ornamented with a gold button, was of a size and fashion to be worn as well under the arm as on the head. When it rained, a small *parapluie* (umbrella) defended his face and wig. Thus he was always prepared to enter into any company without impropriety, or the appearance of negligence. His dress for set public occasions was a suit of rich dark-brown; the coat and waistcoat lined throughout with ermine, which just appeared at the edges; and a small gold-hilted sword. As he was extremely susceptible of cold, he wore flannel under the linings of all his clothes, and usually wore three pair of stockings. He was the first man who ventured to walk through the streets of London with an umbrella over his head. After carrying

one nearly thirty years, he saw them come into general use."

As Jonas died in the year 1786, this statement enables us to ascertain that his first appearance with an umbrella was not much subsequent to the year 1756.

We may conclude this paper with the following anecdote, which has appeared in the newspapers since it was written:—

March of Umbrellas.—When umbrellas marched first into this quarter (Blairgowrie), they were sported only by the minister and the laird, and were looked upon by the common class of people as a perfect phenomena. One day, Daniel M——n went to pay his rent to Col. M'Pherson at Blairgowrie House; when about to return, it came on a shower, and the colonel politely offered him the loan of an umbrella, which was politely and proudly accepted of; and Daniel, with his head two or three inches higher than usual, marched off. Not long after he had left, however, to the colonel's surprise, he again sees Daniel posting towards him with all possible haste, still o'ertopped by his *cotton canopy* (silk umbrellas were out of the question in those days), which he held out, saluting him with, "Hae, hae, Kornel! this'll never do; there's no a door in a' my house that'll tak' it in—my verra barn-door winna tak' it in!"—*Glasgow Constitutional*.

THE TALLOW-TREE OF CHINA.

THE TALLOW-TREE (*croton sebiferum*), called by the Chinese *oo-kieou*, is of the height and appearance of a pear-tree, with twisted branches and a large rounded head. The trunk is short and thick, and the bark smooth. The leaves are alternate, and resemble those of the black poplar. The blossom is yellow; but the most singular part of this tree is the fruit, which is enclosed in a husk, like that of a chestnut. When the fruit is ripe the husk opens of itself, showing three white grains about the bigness of a filbert. These grains contain the beautiful vegetable tallow so useful to the Chinese. The fruit of the tallow-tree goes through nearly the same process as the seed of the oil-plant. The machine by which it is bruised, however, differs from that used in the other case for pounding the seed of the oil-plant; but, says Mr. Abel, "it is, no doubt, often used for both purposes." That writer gives an engraving of it. It consists of a wheel moved backward and forward in the trunk of a tree, which is shaped like a canoe, lined with iron, and fixed in the ground. The axis of the wheel is attached to a long pole, which is laden with a heavy weight and suspended from a horizontal beam. The berries, thus bruised and divided, are exposed for a considerable time to the action of steam until they become very soft, when they are quickly thrown upon layers of straw, covered up again with other layers of straw, and spread about as equally as possible. Men do this with their feet; and as the berries are very hot, and of course warily trodden upon, the operation is said to bear a striking resemblance to dancing. The appearance of a number of men gravely and carefully performing sundry evolutions on their toes has been described as irresistibly ludicrous, particularly as it is unaccompanied by music. By this process large cakes are formed of the mingled grains and straw. The cakes thus formed are afterwards pressed in the same manner as the bruised seeds of the oil-plant. Pressure is, however, not the only method of obtaining the tallow; for it is sometimes procured by boiling the bruised seed in water and collecting the oily matter that floats on the surface. The tallow is hard and white, and has all the sensible properties of that from animals. Du Halde says, that three pounds of vegetable oil are mixed with every ten pounds of the tallow, and that a quantity of wax is used to give it consistence. The best candles are also coated with wax. When properly prepared, they burn almost without smoke, and quite free from disagreeable smell. It does indeed often

happen that the candles prepared with vegetable tallow burn with a great flame, throw out much smoke, and consume very quickly; but this must be attributed to a slovenly and dirty mode of preparation, and to the nature of the wick, which is usually made of a dry and light wood, not much unlike the wick of a rush-light. Candles made of this tallow by Europeans have been found very nearly equal to those made of wax.

The tallow-trees are usually planted in extensive plains, and in regular order. The leaves being either of a deep purple or brilliant red, and the blossoms of a bright yellow, the contrast is said to have a very pleasing effect; and European travellers have described the groves of those trees as the most beautiful objects in a Chinese landscape, having a resemblance to extensive flower-gardens.

VISIT TO A LEAD-MINE.

THE party being suitably arrayed, have sometimes to wait a little until the waggons come out, and in the meantime are each furnished with a candle, round which a piece of clay is fixed to hold it by. At length the rumbling noise of the approaching waggons rapidly increases, and their contents having been deposited, they are prepared for the visitors, the inside being cleaned, and a board placed at each end for a seat. The entrance to the mine, or the level mouth, resembles an open arched doorway, into which the waggons are driven at a moderate pace; and the visitors experience the novel sensation which so unusual a conveyance is apt to create. The jolting, tottering motion of the waggon, the splashing of the water, and the dark and narrow passage, all concur to produce a strange effect, which however soon wears off, and the subterranean traveller finds leisure to observe the rugged roof and walls of the level, or to listen to the guide urging forward his horse in tones which the echoes of the mine often render musical. Even the fragment of a song from the driver sometimes enlivens the journey, but on no account is whistling allowed to be heard in a mine. The same prejudice exists among seamen, but whence its origin is probably unknown. * * * * * The ascent of a rise is frequently attended with some difficulty, especially to ladies; but the gallantry of the gentlemen, and the effective civility of the miners, soon overcome the apparent dangers, and, one by one, they are raised into the workings of the vein. Hence the party are conducted along the mine drift of the vein, and this part of the expedition must of course vary in different mines; in all, however, the stranger is apt to be impressed with feelings of awe at the idea of being so far underground. The contemplative mind cannot but find many interesting subjects of reflection on the distribution of so much wealth in a country otherwise so barren—the various uncertainties which are the means of so extensive employment—the fluctuations of fortune so often resulting from mining adventures, and the ingenuity displayed in prosecuting them, are all circumstances which may engage the attention of a reflecting mind. To the mineralogist the interior of a mine, especially if it contain any spar-encrusted caverns, is a sort of “home, sweet home,” where the lovers of that science and of geology may derive copious stores of intellectual enjoyment. * * * * * The progress along vein workings is often “with cautious step and slow,” especially among the intricacies of flat workings. the friendly caution of “Take care ye dinna fall down the rise,” sometimes calling the visitor’s attention, absorbed perhaps in other thoughts, to a yawning gulf not to be passed over without some caution. Sometimes an almost perfect stillness is suddenly broken by a noise like distant thunder, the report of a blast, which, rolling through the workings of the mine, at length, after many reverberations, dies away. The noise of work “falling down a rise,” and the rumbling of waggons, occasionally salute the ear; the sound of the latter, gradually increasing and lessening, resembles the solemn effect of distant thunder.

The miners usually describe the blasting and other modes of working the ore, and frequently fire a shot for the entertainment of the visitor; but, when near at hand, the effect is by no means so striking as when distance softens the noise and adds repeated echoes to it. At length arrived at the far end, or forehead of the vein, the party usually rest, and a pleasant company is occasionally formed by the ac-

cession of two or three partnerships. Spirits or other refreshments are occasionally taken by the visitors; and those who choose to spend an hour in the company of miners may frequently derive both information and amusement. Most of the miners are well acquainted with practical mining, and with this is necessarily blended a knowledge of many facts in geology and mineralogy. But many of them are also tolerably well informed on other subjects; and a friend of the author’s was much surprised in one of these forehead meetings to hear ‘Blackstone’s Commentaries’ quoted by a miner both with accuracy and direct reference to the subject of discussion.

The miners work by what is often in other trades called piece-work, so that the time spent with strangers is taken from their own labour; and the prodigal expenditure of light is also at their own cost. By the latter is meant the custom of miners of not putting out their candles, however numerous the company may be; and a forehead assemblage presents a brilliant illumination, twenty or thirty candles being sometimes placed against the wall. If any partners of the mines are present, many are the speculations on the goodness and improving prospects of the grove. The “bonny dawk” and “excellent rider,” as well as the ore, come in for a share of gratulation, and are often considered harbingers of the vein being still more productive. Many a lively song and joke are often added to the entertainment of such an assemblage as we are now describing. One example, spoken by a miner, may suffice as a specimen of dialect and humour:—“An folk wad nobbit let folk like folk as weel as folk wad like to like folk, folk wad like folk as weel as folk ever liked folk sin folk was folk!” It may here be remarked that the conversation of miners sometimes has a curious effect from their assuming, as it were, a sort of volition in the mineral world. Thus they speak of a vein being “frightened” to climb the hill, and that she therefore “swims away” to the sun side (a feminine appellation being generally used). The throw of the strata is attributed, as it were, to an “act” of the vein:—“She throws the north cheek up:” these are homely but they are also expressive modes of describing what they have occasion to speak of, and they save a world of words.—*Sopwith’s Account of the Mining Districts.*

Usefulness.—How barren a tree is he that lives, and spreads, and cumpers the ground, yet leaves not one seed, not one good work to generate after him. I know all cannot leave alike; yet all may leave something, answering their proportion, their kinds.—*Owen Feltham.*

Wine.—The favourite *Vino Santo* of the Ægean is often sold on the spot for a penny a gallon. Some English merchants occupy the *Marsala* vineyards in Sicily: they, or others, might well extend their enterprise to the Greek islands, where a vast supply of most cheap and excellent wine could be raised.

A Cause of Unanimity in Crowds.—The shouting of multitudes, by the sole strength of the sound, so amazes and confounds the imagination, that, in this staggering and hurry of the mind, the best-established tempers can scarcely forbear being borne down, and joining in the common cry and common resolution of the crowd.—*Burke.*

Unprofitable Discussions.—Unhappy men as we are, we spend our days in unprofitable questions and disputations, intricate subtilities about moonshine in the water, leaving, in the mean time, those chiefest treasures of nature untouched wherein the best medicines for all manner of diseases are to be found; and do not only neglect them ourselves, but hinder, condemn, forbid, and scoff at others that are willing to inquire after them.—“*Severinus the Dane,*” quoted in *Burton.*

* * * * * The Office of the Society for the Diffusion of Useful Knowledge is at 59, Lincoln’s Inn Fields.

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THE LONDON AND GREENWICH VIADUCT AND RAILWAY.



[London and Greenwich Railway, from near Bermondsey New Church.]

THE London and Greenwich Railway must necessarily possess much interest with the inhabitants of the metropolis, were it only from the circumstance of being the first constructed in its neighbourhood. As a work

of art it is undoubtedly very striking, while the minor considerations involved in the plan are novel and interesting. The distance between London Bridge and Greenwich is about five miles by the public carriage-

way; the line of the railway is three miles and three-quarters; the railway, proceeding from the south side of London bridge, is carried on a viaduct, supported by nearly a thousand arches; these arches are intended to be converted into dwelling-houses or places of business, while the projectors calculate that the footway, being so much more direct than the public highway, will become a thoroughfare for pedestrians and carriages, from which a revenue by way of toll will accrue to the company; and that thus the expense of erecting the viaduct (at first sight formidable, and likely to continue for a long time a heavy burden on the capital) will be as no thing when compared with the profits which will probably arise from these sources, independently of the returns from the railway itself.

In addition to these considerations, it is also calculated that the London and Greenwich Railway will become a sort of turnpike road, by which other railways will be enabled to open a communication with the heart of London. An Act was passed during the last Session of Parliament for the construction of a railway between Brighton and Croydon, an arm of which is to run into the London and Greenwich Railway; and railways between London, Gravesend, and Dover are projected, which will be, in fact, only extensions of the Greenwich one. Other railways, which cannot be brought within several miles of London, may also form junctions with the Greenwich Railway, so as to deposit their goods and passengers with the least expense and delay in almost the centre of the trading portion of the metropolis.

Independently of these commercial considerations, by which the simple circumstance of a railroad communication being opened between London and one of its most frequented suburbs is likely to become very useful to the public and profitable to the proprietors, the work itself is really worthy of the term frequently applied to it, "magnificent." If completed according to the original plan, namely, the arches fitted up as dwelling-houses or places of business, and if the expectations of the footway becoming a great thoroughfare are realized, there will then be exhibited the fine spectacle of a street of nearly four miles in extent, along which an almost perpetual stream of traffic is flowing, while, above, the rushing of the engines with their loaded trains, bearing in and out of London thousands bent on pleasure or business, will form not the least remarkable feature of the scene.

But as the railway is not yet completed, this picture has yet to be filled up. In the meantime a short account of what has been done, may not be unacceptable to our readers.

The London and Greenwich Railway Company was incorporated by Act of Parliament obtained in 1833. The passing of the act through both houses of the legislature does not appear to have attracted much attention. Complaints have been made that a clause in the act has retarded the progress of the work. This clause empowers local committees to decide on the plans which may be proposed for passing the railway over the several roads which cross the line. How far this is a grievance is, of course, matter of opinion;—if the work has been retarded, its beauty and uniformity have not been affected. The capital of the Company was set out at 400,000*l.*, in twenty thousand shares of 20*l.* each. The projector and engineer of the railway is Lieut.-Colonel Landmann, late of the Royal Engineers. The elevation of the viaduct is 22 feet; the arches are built with brick, and it is stated in the 'Companion to the Almanac' for 1835, that the consumption of brick during the progress of the work (at one period the consumption was about one hundred thousand daily) very materially affected the price of that article in London. In a printed statement circulated respecting the railway, it is

said that "the work is being erected in a most substantial manner upon concrete foundations, with walls of considerable thickness crossing the arches, (intersected with concrete) upon which blocks of granite, one foot apart, will be fixed, bearing iron chairs, holding malleable iron rails of greater thickness than yet laid on any other line; strong parapet walls will also be erected, although along the Manchester and Liverpool Railway embankments (which in some parts are very much higher than these arches will be) there is no barrier whatever; these parapets will be within eight inches of the engine and train of carriages, so that in case of any accident, the whole will be kept in an upright position, preventing the weight of even a single carriage falling upon any portion of the parapets." Two miles and a quarter of the railway and viaduct are now finished; the remainder of the distance is rapidly approaching completion; probably early in 1836—at all events by the commencement of summer—the entire line from London Bridge to Greenwich will be opened.

At present the railway terminates at Deptford, at which end a number of the arches are converted into workshops for the use of the smiths, carpenters, &c. employed by the Company. At this end, also, two of the arches are fitted up as dwelling-houses, and are exhibited as specimens of the manner in which it is intended that the remainder will be, or ought to be, fitted up. These houses contain six rooms each, and, though small, appear comfortable, and even neat. A question will naturally be asked, in what degree will the comfort of the future inhabitants of these singular houses be affected by the noise of the engines and trains of carriages passing overhead? One individual described the passing of a train, while he was within one of the houses, as resembling a distant roll of thunder, which was, however, from the rapidity of motion, away in an instant; another thought it resembled the sudden passing of a heavily laden waggon, the noise of which did not at all disturb his comfort. There will be different opinions upon this point, according to the varying sensitiveness of individuals; and no fair opportunity will be afforded of forming a correct judgment until the railway is opened and the traffic on it begun. The noise will, however, be much less than many persons might be inclined to suppose; the solidity of the arches and the smoothness of the railway will diminish the vibration. In order to prevent the annoyance of the smoke, which, on the supposition of the arches being all tenanted, and heated by the ordinary mode, would render the railway absolutely impassable, the houses are fitted up with gas stoves, very neat in their construction. A number of the arches have doorways, by which two or three arches may be converted into one house or warehouse, if required. A paragraph in the newspapers states that it is in contemplation, among other improvements in the borough of Southwark, to remove the hop-market from its present position to a new site under the arches of the Greenwich Railway. There can be little doubt of the success of the speculation as respects the occupation of the arches on the side next to London; whether they will be occupied the entire way, remains to be seen.

The line of the railway from London Bridge crosses Russell Street, three roads, termed the Neckenger, Grange, and Blue Anchor Roads, the Surrey Canal, and one or two lanes or narrow roads, which cross fields. The view given in the wood-cut represents that portion of the railway near the Blue Anchor Road, and within a short distance of Bermondsey New Church. There is a low parapet-wall which runs along the footway, separating it from the fields and garden-grounds, but which is not given in the wood-cut, in order to show the elevation of the arches. The path along one side of the arches was originally intended to be reserved for pedestrians, and the other to be used by carriages,

but this arrangement is not decided upon. At present, the pathway is open to pedestrians on the payment of a toll of one penny each.

It is almost needless to state that the viaduct will be reserved exclusively for the railway; no persons being allowed to be on it except such as will be conveyed by the trains of carriages. The danger of accidents will be thereby much diminished, while the prospect from the railway—an elevation of twenty-two feet—will be a very great addition to the pleasure of conveyance. Greenwich,—the favoured resort of the pent-up citizen of London,—with its fine Park and interesting Hospital, being brought within ten minutes' distance of the metropolis, will doubtless receive an augmentation of its visitors;—the very excitement of travelling on a railroad, free from the annoyance of summer dust, and with the advantage of the prospect, will of itself draw numbers to enjoy the pleasure. There is another consideration:—the facility of communication which will be afforded by the railway ought not to be overlooked in devising some plan to obviate the numerous accidents that have occurred on the Thames, in the passage of what is termed “the Pool,” by the collision of steamboats with small vessels, and from which, of late, many lives have been lost.

The average number of passengers by coaches between London and Greenwich has been estimated, from returns made to the House of Commons, at 4000 daily.

CHINA.—No. IX.

THE VARNISH-TREE.

THE VARNISH-TREE (*rhus vernix*).—The beautiful black Japan varnish so much admired in Europe is the production of a tree which grows wild as well in China as Japan. It is cultivated in plantations, and is so much improved by the treatment it receives that a cultivated tree affords three times more of this valuable product than the wild one. The Chinese call the tree “Tsi Shoo:” it has some resemblance to the ash, with leaves shaped like those of the laurel, of a light green colour and downy feel. It is of no great beauty, but is valuable as the source of a very lucrative manufacture. There is scarcely anything more curious in this tree than the common manner of propagating it, which is neither by seeds nor suckers. Early in spring, a small branch or twig is selected, about a foot and a-half or two feet in length, and a ring of bark cut from it all round, about half an inch in breadth. The wound is immediately coated up with smooth soft clay, and a ball of the same clay formed all round it as large as a child's head. This is then covered up with matting to prevent it from falling to pieces, and a vessel of water hung over with a very minute hole in the under part, sufficient to let the water drop slowly upon the ball and to keep it constantly moist. As the water drops from the vessel it is of course replaced from time to time, and in the course of six months it is found that the wounded edges of the bark have shot forth into the mass of clay, fibre-like roots, which form the more readily as the tree is still supported by the sap from its parent stock. When the twig is thought to have taken sufficient root in the mass of clay to support an independent existence, it is sawed off from the tree a little below the clay, placed immediately into a hole prepared for the purpose, and becomes at once a tree.

When these trees are seven or eight years old, they are capable of supplying the precious varnish, which is gathered in the following manner:—About the middle of summer, a number of labourers proceed to the plantations of these trees, each furnished with a crooked knife and a large number of hollow shells, larger than

oyster-shells. With their knives they make many incisions in the bark of the trees about two inches in length, and under each incision they force in the edge of the shell, which easily penetrates the soft bark and remains in the tree. This operation is performed in the evening, as the varnish flows only in the night. The next morning the workmen proceed again to the plantation; each shell is either wholly or partially filled with varnish; this they scrape out carefully with their knives, depositing it in a vessel which they carry with them, and throw the shells into a basket at the foot of the tree. In the evening the shells are replaced, and the varnish again collected in the morning. This process is repeated throughout the summer, or until the varnish ceases to flow. It is computed that fifty trees, which can be attended by a single workman, will yield a pound of varnish every night. When the gathering is over, the varnish is strained through a thin cloth, loosely suspended over an earthen vessel; and the little impurity that remains in the strainer is used in physic.

There is a corrosive property in the varnish which operates very injuriously to the workmen employed in the preparation of the varnish, if the utmost care and precaution be not taken to obviate its distressing effects; a kind of tetter appears on the face, and in the course of a few days spreads over the whole body; the skin becomes red and painful, the head swells, and the whole surface of the body is covered with troublesome sores.

To prevent these effects the workmen rub their bodies well with prepared oil, before they proceed to their work; they wash themselves with a decoction of herbs and bark, and prepare themselves by a course of medicine. In addition to these precautions, they wrap their heads in linen veils whenever they are at their work, leaving only two holes for their eyes; and also cover themselves with a close dress of leather, and wear long gloves reaching above the elbows; by these means they are enabled to escape the diseases generated by the noxious properties of the varnish-tree.* It is not improbable that an exaggerated version of these precautions may have given the first idea of the fable of the dreadful Upas or poison-tree of Java, with which the Dutch writers of the last century amused or horrified their readers.

Another tree very useful to the Chinese artisans is the Kou-Chou, which resembles a fig-tree. This tree on incision yields a milk, or liquid gum, which they use in gilding with leaf-gold. They wet their pencils in it, and then draw their figures and ornaments with the gum upon wood, over which they apply the leaf-gold, which is so firmly cemented by the gum, that it never detaches. This gum in its effects is like the transferring varnish now used in Europe, but more tenacious.

Valour.—I love the man that is modestly valiant; that stirs not till he must needs; and then to purpose.—*O. Feltham*.

Talkativeness.—A talkative fellow is like an unbraced drum, which beats a wise man out of his wits. Surely nature did not guard the tongue with the double fence of teeth and lips, but that she meant it should not move too nimbly. I like in Isocrates, when of a scholar, full of words, he asked a double fee: one to learn him to speak well; another to teach him to hold his peace.—*O. Feltham*.

* It is said that there are men that will handle this varnish-tree or touch the juice with impunity, while others are dreadfully affected even by being in the way of the smoke, or the wind which carries the effluvia of the tree. The artisans who employ this varnish can only work in the dry season when the north wind blows. The varnish is brought to market in great tubs—its natural colour is white, and it looks like cream, but it blackens in the air. Dampier says they make in Tonquin the best glue in the world from it.

LEYDEN UNIVERSITY.



[The University at Leyden.]

THE Leyden University, so celebrated in theology and medicine, was founded in the year 1575. During the previous year the citizens of Leyden had made a noble stand against the Spaniards, and had sustained a siege, in which they had suffered severely; and, amongst other privileges conferred upon the city by William Prince of Orange and the states of the provinces as a reward of their fidelity and devotedness, the University was established.

One of the earliest students was Arminius, whose name is familiar to every one in the slightest degree acquainted with the history of theological controversy. He became one of the professors of divinity at the University; and it was with his colleague, Francis Gomar—or Gomar, as his name is Latinized,—that the controversy began, which, during the lifetime of the parties, not only shook the province of Holland but agitated Protestant Europe. That controversy exists to this day.

Amongst many able men who adorned the University, and extended its reputation, Boerhaave is conspicuous. That truly illustrious man was worthy of the veneration and affection with which he was regarded by the citizens of Leyden and the students of the University. As professor of chemistry, of botany, and ultimately as rector, during the long period in which he was connected with the University, its character,

especially as a school of medicine, was very high. So European was Boerhaave's reputation that, as the story goes, a letter was addressed to him by a Chinese mandarin, which bore the superscription, "To Boerhaave in Europe," and which found him without delay! The story, as is remarked in the 'Penny Cyclopædia,' is probably apocryphal, but it illustrates the extent of Boerhaave's reputation. (See the Lives of Arminius and Boerhaave in the 'Penny Cyclopædia.')

Mrs. Radcliffe, whose journey through Holland was published about forty years ago, says, "The University would not be known to exist if it had no more conspicuous objects than its buildings. The Dutch universities have no endowed foundations, so that the professors, who have their salaries from the States, live in private houses, and the students in lodgings." There is a great similarity between the government and regulations of the Scotch universities and that of Leyden; in fact, nearly all the universities of Protestant Germany have a similarity with the Scotch universities. This is one reason why so many students—especially medical students—have come from the Continent to attend the University of Edinburgh. The reputation of this latter university as a school of medicine, rose very high in the eighteenth century, while that of Leyden, particularly after the death of Boerhaave, began to decline.

The library of Leyden University is ordinarily stated

to contain 60,000 volumes and 14,000 manuscripts. The Botanical Garden is a remarkably fine object; the Anatomical Theatre, the Observatory, and the Museum, are also worthy of the University.

In a volume of the 'Family Library,' published in 1831, and entitled 'A Family Tour through South Holland,' there are the following remarks respecting the University of Leyden:—

"They were just now employed in adding considerably to the buildings of the University, the number of students, which generally amounted to about 300, having increased to 500 within the last three years. Attached to the University is a Museum of Natural History and Comparative Anatomy, beautifully and scientifically arranged, and a Library of 50,000 volumes. To the Museum has recently been added the splendid collection of birds belonging to Mr. Temmink of Amsterdam, the produce chiefly of Java and the other Oriental possessions of the Dutch; and Professor Lesson is probably the first ornithologist in Europe.

"The Botanical Garden does credit to all who belong to it, being kept in the highest possible order. The walks are beautiful, and without a pebble: they are covered with a mixture of peat earth, and the spent dust of tanners' oak bark. The garden is tastefully laid out in clumps of shrubbery in various forms, round which, on borders, are the various plants, named and numbered according to the system of Jussieu. The whole extent is seven acres, four of which have only been added a few years ago, and laid out in good taste by the late Professor Brugman, as a garden for the reception of medicinal plants and for the use of the medical students. Among the hot-house plants we saw a date-palm with fruit upon it, which the gardener said had been there two hundred years.

"It may be questioned whether the Botanical Garden of Leyden and the Museum are not superior to the Jardin des Plantes and its Museum in Paris. Taken altogether, we were of opinion that they had a decided preference, though they wanted the attraction of living animals, of the influence of which we have had experience in the multitudes that flock to the Zoological Gardens of London."

In 1830, the number of students which matriculated at Leyden was 684; in 1831, it amounted to 791. Previous to 1820, the average number had been about 300.

WRITING MATERIALS.

WE have several times spoken of the great and constant improvement which has been made in the means of diffusing knowledge since the invention of printing. Many of our readers will have compared in their minds the vast difference between the rare and costly manuscript of the fourteenth century and the cheap publications of the present day, and they will probably be aware that the knowledge which in those times could not be procured but at the sacrifice of a large sum is now to be bought for a few pence; but possibly they may not know that the writing materials of the fourteenth century were improvements upon those of more ancient date as important as the invention of printing itself. The invention of paper was perhaps more useful to the world than that of printing: literature had long been declining, even below the state to which it had been reduced by the irruptions of the northern barbarians; and the practice of erasing from books the valuable records of antiquity to make room for false legends and unimportant chronicles was daily rendering its recovery more difficult. Like the lords of Italy in the middle ages, who pulled to pieces the beautiful remains of ancient Rome to furnish materials for their own paltry dwellings, the mischievously busy monks were rapidly destroying the treasures they were

unable to appreciate, and would in a few years have utterly annihilated them. The invention of paper put an end to this practice at once, and we may safely aver that all the works of value which reached the period of that invention, have come down in safety to modern times.

In the most ancient times it would seem that writing was used for great occasions only; and that a rock, a tablet of stone, or a plate of metal was the receptacle. The reader will doubtless remember the stone tables of Moses, and the wish of Job, that his words were graven with an iron pen and lead in the rock. The works of Homer and Hesiod are said to have been first written on plates of lead, and many ancient documents on copper, of considerable extent, are still met with in India. The use of the tablet-stone is still familiar, and the sculptured rocks of the north of Europe show the practice of consigning records to this imperishable material to have been frequent amongst our ancestors of the ninth and tenth centuries.

Some persons are of opinion that the first writing was upon thin pieces of wood, which from their convenience is very probable. Such boards were used at an early period by the Greeks and Romans, and were frequently covered with wax, which was of course more readily written upon than the bare wood. But such writing would be more easily obliterated, and was therefore used chiefly for temporary purposes. In one of the comedies of Aristophanes, a debtor proposes to elude the payment of his debt by melting with a burning-glass the waxen tablet on which the transaction was recorded, while his creditor should be looking over the account. When wax was used any errors were easily erased by rubbing with the blunt end of the piece of metal which served for a pen. To make the characters more visible, it appears that some black substance was smeared over the surface of the white wax, which remained in the scratched marks. The convenience of this process caused the practice to be continued long after the introduction of other materials.

Leaves of trees were used in ancient times by the Egyptians, and probably by the Greeks. The Hindoos continued the use of this material until within these very few centuries, and even at the present time books of leaves are not uncommon in the south of India and in the island of Ceylon. The leaves of some Asiatic trees are, from their size and smoothness, so admirably adapted for books, that the cheapness and beauty of European paper has not been able entirely to supersede their use. If we may judge from the name of leaf being still applied to paper books, we should imagine these leaves to have been formerly the principal material in use.

The interior bark of trees is of very ancient use, and its Latin name (*liber*) seems to intimate that it was as ancient among the Romans as the art of writing itself; no other name being used for a book than that of the writing material. In one respect the bark was superior to the leaf; it could be rolled into a volume, which was the favourite form among the ancients, while the leaf would crack if subjected to such a process.

Linen cloth was occasionally used, but was never very common. The mummy cases found in Egypt have occasionally linen manuscripts folded in them, and the Chinese before the invention of paper used silk and cotton cloths. The Romans also wrote on linen, as is stated by Pliny and others. The use of this material necessarily introduced an alteration in the process of writing. All the other substances we have mentioned were rather engraved than written upon, and an iron point was used for the purpose. To write on linen it was necessary to paint upon it with some coloured liquid, which might get dry and leave a permanent mark. This gave rise to the invention of pen and ink; the first ink used was probably composed of soot or

lamp-black, mixed with some sort of size or gum-water. An ink of this description may be somewhat less flowing than our modern ink, and consequently less adapted for rapid writing; but it has the great advantage of being a solid body of unalterable colour, whereas our ink is liable to have its colour destroyed by several chemical processes. The advantage of a solid body appears in the manuscripts dug up at Herculaneum, which although burned to a perfect charcoal, and buried for nearly eighteen centuries, are still legible; the ink remaining as it were embossed on the surface, and appearing blacker than the burned paper, which, from having been polished, reflects the light in a small degree.

The instrument answering to our pen was the reed, a sort of bulrush, which grew in many parts of the East. Such reeds, cut in the manner of a quill, are still used by all those nations who write the Arabic character; and are found, even by Europeans who have occasion to write much Persian or Arabic, to be more suitable to that character (a way of writing from right to left) than our pens. Those nations who have adopted the Chinese character use a camel's-hair pencil, which is held perpendicularly in the hand; and although it would seem to us to be but little adapted for quick writing, the Chinese write their complicated characters with these implements with a rapidity seldom equalled by European writers.

The quill appears to have been first in use about the year 600: the word *penna*, meaning a quill, is not found in any work older than that period, previous to which we usually find the word *calamus*, a reed. This word still exists in the modern Italian word *calamajo*, which signifies inkstand. The quill has an advantage over the reed in being finer and more durable, the same quill often serving for weeks, and even months. Instances are on record of pens being used for many years. Official clerks may stare at the astounding fact, but where calligraphy is not an object, an immense quantity of writing may be executed without mending a pen. Leo Allatius used the same pen for forty years, and did not wear it out at last: he lost it by some accident, and bewailed his loss bitterly. P. Holland, the translator of Pliny, completed that work with a single pen; and he celebrates the achievement in the following doggerel verse:—

“ With one sole pen I wrote this book,
Made of a grey goose quill;
A pen it was when I it took,
A pen I leave it still.”

We may well laugh at distress of mind occasioned by the loss of such a relic; and a great writer has pronounced the fondness for an old pen to be the mark of a little mind: but, after all, these attachments to insensible objects have a tinge of poetry in them, and are marks at least of an amiable temper.

The skins of animals were another and very ancient material for writing upon. The obvious convenience of this substance must have caused its adoption as soon as any means were devised for preserving it from spoiling; and the large size of skins, added to their pliability, must have caused them to be preferred to leaves of trees. It is most probable that the rolls of books mentioned by Ezekiel, Isaiah, and other prophets, were rolls of skins; and the very ancient copies of the Bible preserved by the Jews of Cochin, in India, are said to be of leather. These skins would naturally be made as white as it was practicable, in order to receive and show the ink, and thus by degrees would parchment be invented.

The invention of parchment is usually attributed to Eumenes, King of Pergamus, who reigned in the third century before the Christian Era. He was the founder of an extensive library, in which the new manufacture was largely introduced. The use of this article, aided

by that of paper from papyrus, which was first brought from Egypt about the same time, had a most beneficial influence in diffusing literature. Its whiteness, strength, and size, gave it a preference over every other material; and to its durability we chiefly owe the remains of ancient science which have reached our times. Even at the present day, with all our improvements in paper-making, the use of parchment for documents of importance prevails over that of paper. Its English name is most probably a corruption of the ancient one, *Pergamena*, which was derived from that of the place where it was first manufactured or most used.

The Egyptian paper, from the papyrus-plant, was for a long time as much in use as parchment. The papyrus-plant was described in Vol. I., p. 310; but the paper made from it was not what we understand by the term,—a mass of torn fragments of vegetable matter, evenly spread out, and joined together by size and their own adhesiveness; it was a species of inner bark, or thin pellicle, separated from the plant by a sharp tool, and pasted together in layers until it attained the desired size and thickness, when it was pressed and polished. This sort of paper continued to be used contemporaneously with parchment until about the twelfth century, when the introduction of modern paper caused it to be disused, and the art of making it was lost. It was very extensively employed by the Romans, and by the Greeks in Rome. All the rolls burned at Herculaneum, and preserved by the fire which appeared to destroy them, were written on papyrus. No other writing is known to exist of nearly that age, although we have some undoubted specimens of ancient Egyptian papyrus. We may observe, however, that many old manuscripts said to be on papyrus are in reality written on cotton-paper.

In the ninth or tenth century, the use of paper, properly so called, was introduced into Europe. This article had already been manufactured in China, from a remote period (A.D. 95), of the internal substance of the bamboo, sometimes of the mulberry-tree, and occasionally of cotton. About the middle of the seventh century the manufacture was brought to Samarcand, or perhaps this city was only the depôt of China paper, as it was of some other objects of Chinese skill brought into the west by the Arabs. It seems to be ascertained that a manufactory of cotton-paper was established at Mecca in the year 716, from whence it was brought by the Greeks to Constantinople.

The invention of cotton-paper, as far as common use required, superseded that of all other writing materials. It was of good colour, made very thick, and glazed with a tooth or hard stone, until it became smooth and lustrous, when it resembled parchment, or vellum. The Greeks are supposed to have introduced it into Western Europe,—first, through Venice into Italy, and afterwards into Germany, where it was known by the name of Greek parchment. Its importation into Spain by the Arabs was most probably somewhat later. Documents of the eighth century on cotton-paper exist in Italy, and many in Germany, as early as the ninth and tenth: in France and Spain it appears to have come into general use about the beginning of the eleventh century; these dates are deduced from those of manuscripts now existing; but it must be remembered that such documents do not afford a certain proof of the period of the introduction of paper; it is not likely that the very first documents written have reached us; many have doubtless perished, and some may exist unknown to us: on the other hand, documents purporting to be of a certain date, may be mere copies made at a more recent period. The earliest date upon cotton-paper known in England is nearly of the middle of the eleventh century.

Cotton-paper appears to have supplied all Europe until the end of the thirteenth century, when linen-

paper, such as we now use, is ascertained to have been invented. This invention has been placed considerably earlier by some good authorities, but it would appear that they have confounded linen with cotton paper. In truth the earlier specimens of linen-paper differ so little from that of cotton, that it requires a considerable acquaintance with the peculiar characters of the two kinds to distinguish them. It is most likely that before linen-paper came into use as a separate article, linen rags would be occasionally mingled with cotton by the manufacturer, and as such a mixture would tend to improve the fabric, the proportion of linen would be increased, until at length it would be used alone. The oldest documents ascertained by competent judges to be on paper made wholly of linen, date very early in the fourteenth century, and before the close of that century they are found in England, France, Spain, Italy, and Germany. But the manufacture spread slowly, although the paper itself was soon in use in all parts of Europe. The first manufactures appear to have been in Spain and Italy; into the former country the Arabs had long before introduced the making of cotton-paper, and that of linen would naturally be substituted there as early as in any place, particularly as cotton was rare, and flax an article of frequent cultivation. In the year 1366 we find an exclusive patent granted by the Republic of Venice to the town of Treviso, for the manufacture of linen-paper. England was so slow in adopting the art, that although paper was used here as early as the fourteenth century, the first paper-mill was not built until the end of the sixteenth, when it was introduced by a German at Dartford in Kent.

THE KNIGHTS TEMPLARS.—No. I.

PROCEEDING up the Rue du Temple in Paris, we come, before reaching the Boulevards, to a large building occupying the angle formed by the junction of this street with the Rue de la Corderie. This is the ancient palace of the Knights Templars, being the house in which resided the chief, or Grand Master, as he was called, of that famous association, once so eminent for its wealth and power, but destined to be better remembered in after-times for the lesson of the instability of human grandeur bequeathed by it to history in its sudden downfall.

The order of Knights Templars was one of those grotesque confederacies of military monks which grew out of the Crusades. Its founders were nine of the followers of Godfrey of Bouillon, who soon after the conquest of Jerusalem united themselves by a vow to defend the holy city and its devout visitors from the outrages of the Paynim. The zeal of these pious chevaliers rapidly attracted imitators; and many of the other Christian warriors having joined their company, King Baldwin II. in 1118 granted the society for their residence a building contiguous to the Temple; whence the name by which they were thenceforth known. In 1128 they were recognised by the council of Troyes, when a rule or constitution was prescribed to them, and a white cloak, with a red cross on the left shoulder, was appointed to be the uniform or canonical attire of the order. After this the community speedily spread itself over the different countries of Christendom; and in course of time it acquired establishments in France, England, Germany, Spain, Portugal, Sweden, Denmark, Poland, Sardinia, Sicily, Cyprus, Constantinople, and elsewhere.

Paris, however, became eventually the principal seat of the Templars. The earliest notice that has been discovered of their appearance in this city, is the record of a chapter of the order which was held here in the year 1147, and at which 130 members were present. On this occasion it is probable that the knights assembled in a house (long after known by the name of Le Vieux

Temple) which they had near the Place St. Gervais, and a tower belonging to which was standing in the last century behind the choir of the church of St. Jean-en-Grève.* The Templars had fixed themselves, however, in the Ville Neuve du Temple, as it was then called, before the year 1182.

For many years after this time the order of the soldiery of the Temple subsisted in honour and renown. The grand duty imposed upon them, and which formed the main purpose of their institution,—the defence, namely, of the Holy Land against the infidels,—they must at least be allowed to have sustained with a valour and devotedness not to be surpassed. Throughout the long and fluctuating struggle between the Cross and the Crescent which fills the history of the twelfth and thirteenth centuries, we find the Templars among the foremost of the brave wherever danger is to be encountered; and at Jerusalem, at Cyprus, at Ptolemais, or at whatever other point was for the moment the focus of the contention, shedding their blood freely in “the imminent deadly breach” or the battle-field. “Clothed in simple attire and covered with dust,” says the eloquent St. Bernard, in one of those addresses by which he so powerfully promoted the second Crusade, “they present a visage embrowned by the heat of the sun, and a look haughty and severe: at the approach of battle they arm themselves with faith within and with iron without; their weapons are their only ornament, and these they use with courage in the greatest perils, fearing neither the number nor the strength of the barbarians: all their trust is in the God of armies; and in combating for his cause, they seek a sure victory or a holy and honourable death. Oh! happy mode of life, in which death is waited for without fear, desired with joy, and received with assurance of salvation!” And this true military spirit continued to animate them so long as they formed a community. All the wealth and power which they acquired never made them forget that they were the Soldiers of the Faith, or tempted them to shrink from any exertion or exposure to which that title called them.

As for the general morals of the Templars, it may probably be admitted that they were not always so unexceptionable as the service to which they had devoted themselves, and the vows by which they were bound, would seem to demand. The period during which they flourished, notwithstanding its spirit of religious enthusiasm, was distinguished by anything rather than purity of manners. Even the combination of devotion and licentiousness in the same character was no uncommon phenomenon; it seemed to be imagined that the one kept the other in countenance. The Crusades themselves were the means of inundating Europe with a tide of immorality, in the disorderly habits which the soldiers of these expeditions brought home with them from their wild campaigns, as well as in that breaking-up of all the regularities of peaceful industry, and that universal unsettlement of society, which the rush of so many adventurers to foreign lands had previously occasioned. The Templars, it may be supposed, did not remain untainted in the midst of this prevailing dissoluteness; and many of them, doubtless, while spending their lives at the rude trade of war, often forgot that they were monks, and demeaned themselves very much after the fashion of their brother soldiers. It is probable, also, that when quartered in the spacious and splendidly furnished residences which belonged to them in France and elsewhere, they took the liberty of mitigating the severity of monastic discipline by many indulgences not hinted at in their statutes, as has been

* The church of St. Jean-en-Grève was mostly demolished during the Revolution; but part of it is still in existence attached to the Hotel de Ville, and forming the City Library and the Salle St. Jean, in which general literary and scientific societies hold their sittings.

done by other religious communities, without having so good an excuse to plead, either in their past services and toils, or in the temptations to which their mode of life had exposed them. Their great wealth, in short, the power with which it armed them, and the plentiful enjoyments of all sorts which it afforded them the means of procuring, may have made both pride and luxurious indulgence common characteristics of the order; and to this extent the charge of degeneracy and corruption which was brought against them was probably well founded.

But of the impiety and enormous profligacy of which they were accused when the object was to accomplish the destruction of the order, certainly no proof has ever been advanced. In a work published a few years ago in France, by M. Raynouard, in which the subject has been examined with great ingenuity and research, and by the aid of many unprinted documents which had never before been brought forward in its illustration, it has been abundantly shown that, up to the moment when it was resolved to sacrifice them, the character of the Templars had remained entirely unblemished by any of the calumnies of which they were then made the victims, and the suspicion of the partial truth of which has continued to cast a shade over the memory of the unfortunate chevaliers. Although many writers have, since the dissolution of the order, given way to the expression of unfavourable surmises with regard to the conduct of its members, no trace of any such imputations is to be found in any production which appeared before that event. On the contrary, not only are the Knights Templars the theme of commendation with the most daring libellers of other churchmen, but we find their valour, their piety, and their munificent charity extolled in the warmest terms only a few years before their suppression by the very men who were so soon to become their persecutors and destroyers. All this certainly does not demonstrate their innocence, but it establishes at least their unsullied reputation, and shows that the unfavourable impressions which have been entertained with regard to them by some authorities in modern times have originated merely in the same evidence which was brought forward to justify the condemnation of the order, and have no other foundation to stand upon: the character and real value of this evidence, however, fortunately do not admit of much dispute.

Philip IV. of France, surnamed the Fair (le Bel), was one of the most resolute and energetic characters that ever occupied the throne of that or any other country. He had become king by the death of his father, Philip III., in 1285, when he was only in his seventeenth year; and from the moment when he obtained possession of the royal authority, he showed himself determined that it should at least suffer no curtailment in his hands. The wars in which he engaged, although for the most part successful, involved him in financial embarrassments from which the expedients usual in that age were found at last inadequate to extricate him. Some new course of revenue, therefore, was to be found; and provided it was likely to prove worth the seizing, Philip was not the man to hesitate about his right of appropriating it, or the means to be employed for that purpose. It was in these circumstances that, after having carried the debasement of the coinage (the customary contrivance in such emergencies) as far as the people would bear, he cast his eyes upon the rich possessions of the Templars, and resolved to seek in the destruction of that renowned fraternity the supply of his necessities.

The instruments of whose assistance Philip mainly availed himself in this scheme, were his two ministers Enguerrard de Marigni and William de Nogaret, men devoted to his interests, and of characters similar to his own. His confederate was the Pope, Clement V.,

whom his influence had recently raised from the Archbishoprick of Bordeaux to the chair of St. Peter, and who was his creature not merely from gratitude, and by the ordinary sympathies between client and patron, but according to some historians, under the bonds of a positive agreement. Clement, some time after his elevation, exhibited to Christendom a remarkable proof of his subserviency to the French king, by transferring the seat of the Popedom across the Alps to Avignon, in the dominions of that monarch.

CONDITION OF THE MINERS IN THE NORTH OF ENGLAND AND IN MEXICO.

EARLY on a Monday morning the streets of Alston ring with the clanking noise of heavy iron-shod clogs, and numerous groups of miners are seen departing to their subterranean labours, laden with jumpers, picks, &c., many of them carrying an ample store of provisions for the week. They generally work eight hours a day, and four, five, or six days a week, according to their circumstances. Some miners have small farms, which occupy their leisure time, while gardening and reading, these most delightful of all recreations, also form the leisure occupation of many.

Some of the mines are so near the residence of the workmen as to admit of their returning home between shifts, while others are situated amid wild and extensive hills and moors, far from any human habitation. Near the entrance of such remote mines is a house or mining shop, with accommodations not only for the miners, but also for the smiths and joiners employed in making and repairing waggons, railways, &c. In the miners' apartment, a number of beds are crowded in different parts; but it would be difficult by any description to convey an idea of the want of cleanliness and comfort which prevails in some of them. If Ledyard, who so beautifully and justly eulogized woman for kindness and hospitality, had visited certain of these mining abodes, he would have praised them with equal eloquence for the order and cleanliness which we chiefly owe to their presiding care, and which by the rougher sex are here so lamentably neglected.

To this description, however, there are some, and it is to be hoped increasing exceptions. The author recollects having seen in a mining shop in Crossfell, a set of very orderly regulations, and since then has been much gratified by the clean and comfortable arrangements of a large mining shop in Teesdale, lately built under the directions of Mr. Stagg. The discomforts of English mining, however, are few in comparison with those of other countries. The following account, for instance, abridged from private letters of miners who emigrated from Alston, gives a lamentable picture of the Mexican miners.

"Their houses and clothing are of little value; the former for the most part being miserable huts, which it would be no hard task to erect in a single day. In families of seven or eight individuals, the furniture, cooking utensils, in short, the whole contents of several huts belonging to the labouring class which we examined, we never found to exceed twenty shillings in value. Not one house in twenty contained either knife, fork, or spoon, and even in several whole villages they could not be had. As for beds, they never think of such a thing, but lie down on the bare floor in the corner of the hut. The dress of the labouring man, when new, would be thought dear for six shillings, and this he wears at all times, and in all places, in the mine and out of it, on Sunday as well as *every-day*, and at night it serves both for bed and bed-clothes, until torn off piece by piece."

If the Mexican miner falls short of English comforts and cleanliness, it appears that he much exceeds our miners in devotion; for the same intelligent correspondent adds the following singular particulars:—"Sixty fathoms down the *Despaches*, one of the entrances to Valenciana mine, is a church, where lamps are continually lighted; the workmen often spend half an hour in it on going to or retiring from work, and none of them pass without bowing before the painted images; they usually *spend an hour in singing* before they begin and the same after they have done work."—*Sopwith's Account of the Mining Districts of Alston Moor, &c.*

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IBRAHIM PASHA'S PALACE.



[Palace of Ibrahim Pasha as seen from the River Nile.]

IN ascending the Nile from Boulac, the port of Cairo, we behold a large irregular edifice of imposing dimensions: this is the Palace of Ibrahim Pasha, son of Mohammed Ali, the viceroy of Egypt. This has been the constant residence of his harem during the absence of that successful warrior in Syria (1833). Immediately opposite this princely dwelling is the Island of Rhoda, which likewise belongs to Ibrahim. Active preparations are making for building a new palace on this fertile island, a great part of which has been already converted, by his direction, into delightful gardens; and these, stocked with European and tropical plants, both useful and ornamental, have already been brought into a high state of culture under the superintendence of Mr. Trail, a scientific and highly intelligent horticulturist, who was engaged in England at the desire of Ibrahim. The wood-cut at the head of this article is taken from a beautiful drawing in water-colours, made on the spot by a young Armenian, a subject of the viceroy of Egypt, who was educated in England at the expense of the Pasha. We may venture to anticipate, from his taste for the arts and proficiency in our language,—which he speaks like a native,—together with his various other useful acquirements, that this prince will hereafter

become a valuable contributor to the improvement of his country. It is gratifying to record, among other proofs of Ibrahim Pasha's superiority to Oriental prejudices, that he has for some time constantly employed persons at his own expense in Upper Egypt to excavate for antiquities, with the avowed intention of forming a museum at Cairo; and has forwarded to that city a considerable collection of books originally belonging to the great mosque at Acre, with an order that they may be appropriated to the foundation of a public library.

THE KNIGHTS TEMPLARS.—No. II.

It was on Friday the 13th of October, 1307, that the Grand Master and all the Knights Templars who were found with him in his residence at Paris were arrested there by command of King Philip, while at the same time all the members of the order in the other parts of France were treated in the same manner. As soon as they were seized they were put into irons; the Palace of the Temple was taken possession of by the king; a proclamation was issued denouncing the unhappy men as monsters of wickedness, whose deeds, and even whose

very words, were enough to pollute the earth and to infect the air; and the people were invited to assemble immediately in the royal garden to listen to the detail of their unheard-of crimes. A multitude having accordingly collected from all the parishes of the capital, several persons appointed for that purpose addressed them, and in the style of oratory best adapted to inflame their passions, recounted to them the charges which had been brought against the devoted order.

According to many authorities, the accusers of the Templars, in the first instance, were two individuals of their own community, who had been condemned by the Grand Master, for their general profligacy, to perpetual imprisonment. Both, it is remarked, afterwards perished disgracefully, one of them having been hanged. In the mean time, however, they received their liberty as a reward for the part which they played. The testimony of other witnesses was subsequently added to theirs,—how obtained, we shall immediately see. The charges themselves may be shortly described as being exactly of the sort most calculated to impose upon the credulity of that age, and to shock the reason of ours. The ceremonial of initiation, it was asserted, was little else than a medley of debauchery and profanity, in which the wildest excesses of both were practised by the whole assembly, and systematically taught to the novice. Whatever may have been the profligacy of individuals, it is sufficiently improbable that in any circumstances conduct such as this should have been hazarded at the general meetings of the order, and especially on occasion of the reception of new members into its bosom; but a fact which has for the first time been noticed by M. Raynouard renders the accusation still more palpably absurd and incredible. It is ascertained that the Templars, not in France only, but in other countries, were well aware of the conspiracy which was in preparation for their ruin a very considerable time before their actual arrest. A letter of Clement's dated the 22nd of August, 1307 (nearly two months antecedent to that event), testifies that the Grand Master and other chiefs of the order, having learned that they were denounced, had applied to him, not once only, but many times, to institute an investigation respecting the matters of which they were accused. This readiness, and even anxiety, to meet the charges against them, of itself argues favourably for their innocence; but we may at least be certain that, if any criminal practices had hitherto polluted their meetings, they would be abandoned now that they knew the dangerous position in which they stood. Yet upon referring to the evidence, it appears that several of the witnesses who depose to the same flagitious transactions as the rest had, according to their own account, been received into the order, some only a few months, some only a few weeks, some only a few days, before the general arrest. The persons who gave this evidence were members who thereby purchased their life and freedom, while their brethren who asserted the falsehood of the accusations were consigned to torture, imprisonment, and the stake. Their testimony, suspicious enough from the circumstances in which it was delivered, ought to have been felt to be altogether confuted by its own intrinsic absurdity.

But, in truth, what can we think of any of the stories brought forward upon this occasion, except that they were well devised to catch the easy faith of that barbarous age, when we look to the mingled tissue of the horrible, the ludicrous, and the impossible, which forms their substance! So vehement, if we are to believe these narratives, was the anti-christian zeal of the chevaliers, that no sooner had they admitted among them a new brother than they forced him to deny the Saviour and to trample upon the crucifix. Yet such at the same time was their abject superstition, that they were ac-

customed at their general meetings to offer adoration to a wooden head with a great beard. Their impiety seems to have been at once the most daring, the most purposeless, and the most irreconcilable, either with their interests, the feelings and habits natural to their profession, or even their other follies and vices, that was ever heard of, and only to be understood, indeed, in its recklessness and inconsistency, on the supposition that it was intended to include every variety of outrage on the common faith which was likely to render it at the same time most revolting if discovered, and most obnoxious to detection. Some of the witnesses, it may be added, even asserted that the devil was wont to appear at the meetings of the order, in the form of a cat, which conversed with the members as they knelt down and worshipped it. This tale, we may be sure, was not the least greedily swallowed of the whole collection.

The accusations, in short, to which the Templars were sacrificed, resemble nothing so much in their general character as the charges on which so many unhappy persons, in our own and other countries, were wont to be condemned to death for the imaginary crimes of sorcery and witchcraft. The parallel holds good also in regard to the manner in which the evidence in both cases was obtained.

The Knights, as soon as they were arrested, were everywhere put to the torture to force them to confess the crimes laid to their charge. Those who were apprehended in Paris were committed for this purpose to the tender mercies of the inquisitor Imbert, the king's confessor, who seems to have been a person not given to any negligent performance of the duties of his office. So severe were the agonies to which he and his assistants subjected their victims, that thirty-six of them died in their hands. Others, unable to endure such extremity of anguish, confessed anything that was asked of them. Among this latter number, was the Grand Master himself, Jacques Molay, of a noble family of Burgundy, who had been admitted a knight in 1265, and after having distinguished himself in the wars against the infidels, had been, while absent beyond the seas, unanimously elected chief of the order, in 1298. He confessed that he had denied his Redeemer, and once trampled on the Cross.

Of those, however, who thus yielded at the moment to the weakness of nature, many soon repented of the treason to their order and to truth, by which they had purchased their release from the rack, and with indignant self-condemnation recanted the confessions which only excruciating pain had wrung from them. No one lamented his pusillanimity more bitterly than the Grand Master. We cannot afford to pursue the series of violent and iniquitous proceedings which were resorted to during a period of nearly two years towards the unfortunate knights who, in the different towns of the kingdom, had survived the first havock of the torturers, and who all this while lay loaded with irons in their dungeons, the king drawing their revenues. At last a commission appointed to try them met at Paris on the 7th of August, 1309. On the 26th of November, the Grand Master, being brought before this tribunal, declared his intention of standing on his defence. "Although I do not conceal from myself," he added, "the difficulty of the task I undertake, a prisoner as I am in the hands of the pope and of the king, and without even the smallest sum of money wherewith to defray the necessary expenses of such a process." On the following day, Tonsard de Gisi was brought forward, another of the knights who had confessed the truth of the allegations brought against the fraternity. "Do you mean to defend the order?" asked the Commissioners. "I do," answered De Gisi; "the imputation which has been cast upon us of denying Jesus Christ, of trampling

upon his cross, and of committing infamous immoralities at our meetings, and all the other accusations to which we have been subjected, are false. If I myself or other knights have made confessions before the bishop of Paris or elsewhere, we have betrayed the truth, we have yielded to fear, to danger, or to violence. We were tortured by Hexian de Beziers, the Prior of Montfaucon, and by the monk William Robert, our enemies. Many of the prisoners agreed among themselves to make these confessions to avoid death, and because thirty-six knights had died under the torture at Paris, besides a great number in other places. As for me I am ready to defend the order, in my own name, and in the name of all those who shall make common cause with me, if from the property of the order there be allowed me therewithal to defray the necessary expense." He then demanded the assistance of counsel whom he named, and laid on the table a list of persons whom he regarded as the enemies of himself and his brethren, and consequently as unfit to judge them or to be heard against them. It comprised only four or five individuals, at the head of whom stood the two monks who had presided over his sufferings on the rack, and of whose energetic practice on that occasion their patient naturally had retained a vivid recollection. "Were you put to the torture?" asked the Commissioners. "Yes," he replied, "three months before the confession which I made to the bishop. They had tied my hands behind my back with such tightness that the blood was almost oozing through the nails; I was left for an hour in this state in a dungeon." At a subsequent meeting of the commission, another knight, Bernard de Vado, said, "I was tortured so terribly, and held so long before a burning fire, that the flesh on the soles of my feet was consumed, and these two bones which I now lay before you were detached."

The number of knights who presented themselves to intimate their readiness to defend the order, having at last risen to nine hundred, seventy-five were selected to undertake that task; and on the 11th of April, 1310, the trial was formally commenced. It was continued by a succession of adjournments to Monday the 11th of May, up to the evening of which day fourteen witnesses had been examined. But by this time the king seems to have come to the conclusion that a process such as this was not the best mode of ensuring the success of his scheme. On that night the brother of the Chancellor Marigny, who had been recently appointed to the archbishoprick of Sens, gave orders for the seizure of fifty-four of the knights appointed to conduct the defence of the order. They were all of the number of those who had formerly made confession of the crimes imputed to them, and had since retracted that avowal. On this pretext they were now designated by the archbishop "relapsed heretics," and condemned by him to the flames. Next day the sentence thus passed upon them was carried into execution: they were burned in a field behind the abbey of St. Antoine. After they had arrived on the ground, their lives and their freedom were offered to them if they would repeat their former confession; but although assailed by the imploring prayers of their friends and relations, and with the torches which were to kindle their fires of martyrdom blazing before their eyes, not one of them could be moved a second time to purchase a prolongation of his days, or an exemption from bodily torment, by falsehood and self-degradation. They died invoking God and the saints, chanting hymns, and with their last breath protesting their innocence from the midst of the flames. Even the spectators, prejudiced as they were against them, could not behold their sufferings and their noble endurance without giving utterance to their admiration and sympathy, mingled with murmurs of indignation against their destroyers.

This terrible example had, to a great degree, the effect intended. Forty-four knights immediately retracted their plea of not guilty. They, along with all the others who acknowledged the crimes imputed to them, were classed as reconciled, set at liberty, and in many cases rewarded. Such as had all along persisted in refusing to confess were condemned to perpetual imprisonment. Meanwhile, the course which had been pursued at Paris with regard to those denominated relapsed heretics was imitated in other parts of the kingdom; and numbers perished in different places by the same cruel death which had been experienced by the victims of the Archbishop of Sens. The commissioners themselves seem to have been astounded by these proceedings; and on the 21st of May they adjourned their sittings till the 3rd of November. When they reassembled on that day, and made the usual proclamation, that all who were willing to defend the order should present themselves, no one appeared. They continued however to receive the depositions of witnesses till the 26th of May, 1311. Several of the knights who were dragged before them had still the courage to persist in their asseverations of innocence; but all the most intrepid members of the order having been by this time destroyed, while such among those still languishing in their dungeons as it was apprehended might prove the most troublesome to deal with were not allowed the privilege of appearing to offer their testimony, it is no wonder that the greater number of the persons examined gave such evidence as suited the views of the managers of the prosecution, and secured their own safety. The number of witnesses in all was 231, of whom about 150 were knights who confessed in whole or in part the crimes charged against the order. It is not too much to say, however, that the records of criminal procedure scarcely present anything more deplorable than these examinations. The witnesses manifest the internal struggle between fear and remorse under which they are writhing, by such contradictions, and other signs of perturbation, reluctance, and apprehension of blundering in their invented tale, as are sufficient, independently even of the absurdity of their statements, to divest them of all claims to belief.

The Sea.—The boundless and unmanageable mass of earth presented by the continents of Asia and Africa has caused those parts of the world, which started the earliest in the race of civilization, to remain almost at the point from whence they set out; while Europe and America, penetrated by so many seas, and communicating with them by so many rivers, have been subdued to the uses of civilization, and have ministered with an ever-growing power to their children's greatness. Well indeed might the policy of the old-priest nobles of Egypt and India endeavour to divert their people from becoming familiar with the sea, and represent the occupation of a seaman as incompatible with the purity of the highest castes. Well might the Spartan aristocracy dread the introduction of foreign manners, and complain that intercourse with foreigners would corrupt their citizens, and seduce them to forsake the institutions of their fathers. Injustice and ignorance must fall if the light be fairly let in upon them: evil can only be fully enjoyed by those who have never tasted good. The sea deserved to be noted by the old aristocracies, inasmuch as it has been the mightiest instrument in the civilization of mankind. In the depth of winter, when the sky is covered with clouds, and the land presents one cold, blank, and lifeless surface of snow, how refreshing is it to the spirits to walk upon the shore, and to enjoy the eternal freshness and liveliness of the ocean! Even so in the deepest winter of the human race, when the earth was but one chilling expanse of inactivity, life was stirring in the waters. There began that spirit whose genial influence has now reached to the land, has broken the chains of winter, and covered the face of the earth with beauty.—*Appendix to Dr. Arnold's Thucydides.*

THE COÏPUS, COYPOU, OR COÛIA.—(*Myopotamus Coïpus*, Comm.)

[The Coïpus.]

THE *couïa*, or *coïpus*, is a most important animal in a commercial point of view. The fine under-fur which invests its body being extensively employed, like that of the beaver, in the manufacture of hats, thousands of its skins are annually imported into Europe, under the name of *racoonda*, and have for nearly forty years supplied the markets, while the animal itself remained unknown to the scientific world. The coïpus belongs to the rodent order, and constitutes the sole example of a genus allied in some respects to that of the beaver, yet differing from it in many external as well as anatomical characters;—while at the same time it is no less evidently allied to the genera *hydromys* and *ondatra*.

Though unnoticed till very lately by naturalists, we are not to suppose that the older writers have left us no traces of its history; on the contrary, we have clear references to it. Until Geoffroy St. Hilaire however published a memoir of the animal in 1805, in the 'Annales du Muséum d'Histoire Naturelle,' these references had been overlooked or disregarded. Commerson had even figured it, but to that figure no attention was paid, till in looking over the vast collection of skins in the storehouses of M. Bechem, a furrier at Paris, Geoffroy St. Hilaire was struck with the resemblance which the skins of this animal bore to the figure in question. Of these skins M. Bechem never received less than a thousand, and often from fifteen to twenty thousand annually, and had long been in the habit of employing the fur for the same purpose as that of the beaver, having observed the similarity of texture between them.

Commerson, who was a naturalist of great eminence, appears to have understood very clearly the systematic affinities of the coïpus: he regarded it with justice as the type of a new genus, to which he gave the title of

myopotamus, the animal being designated as *myopotamus bonariensis*, the specific name bearing allusion to the country where it came under his observation, viz., the province of Buenos Ayres. Long, however, before Commerson, the coïpus was described both by Molina and afterwards by Don Felix d'Azzara.

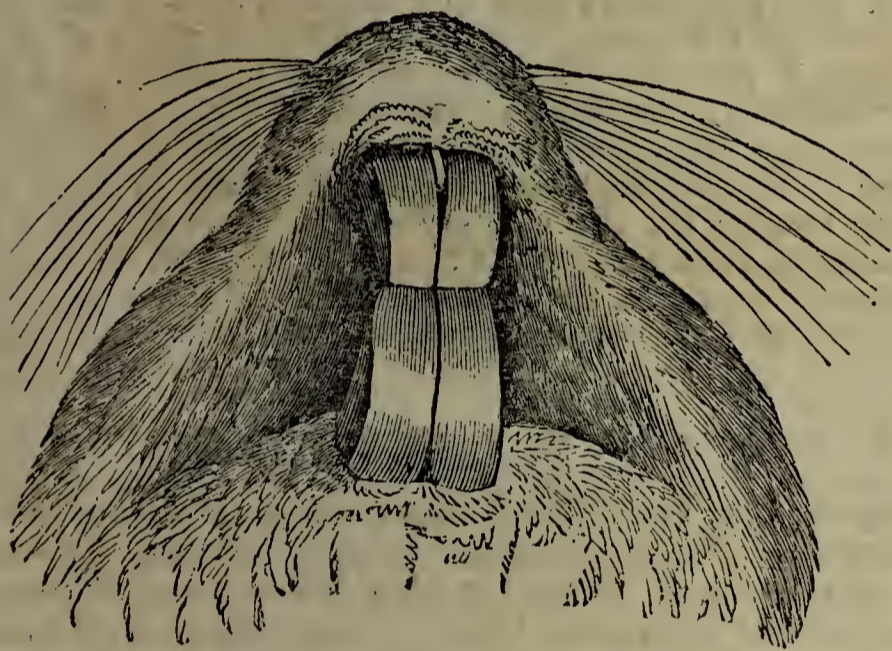
Though M. St. Hilaire published his Memoir in 1809, the attention of British naturalists does not appear to have been directed to the animal in question till long afterwards; nor was it really known to them, for, in 1812, we find an account of it in the Transactions of the Linnæan Society, by the Rev. E. J. Burrow, A.M., F.L.S., under the name of *mus castorides*, without any reference to St. Hilaire or other authorities. Mr. Burrow adds, "The person who first possessed the animal in this country states that he bought it on board a ship from the Brazils: I had afterwards frequent opportunities of observing it, and of making my drawing while it was alive at Exeter 'Change. It died suddenly, and without any apparent cause, and is now in the collection of Mr. Bullock. When teased or disturbed, it uttered a weak cry, but was good-tempered and not easily roused to resistance. The method of feeding was the same with that of most the glires, but the forepart of the body was very little raised."

Such is a summary of the scientific records of the coïpus or coypou.

The coïpus, of which the writer of this article has not only examined numerous perfect skins, but which he has recently had an opportunity of observing in a living state, and of dissecting after death, is a native of the southern and meridional regions of the American Continent. It resides habitually in burrows or holes which it excavates along the banks of the larger rivers, and in these burrows the female brings forth her young,

from five to seven in number, to which she manifests great attachment, taking them with her as soon as sufficiently grown to follow her in her rambles. Every point in the configuration of this animal indicates its aquatic habits, as well as its facility of burrowing.

The body is clothed with two sorts of hair, an under garment of fine close fur, almost water-proof, and an upper layer of long shining straight hairs of rich brown, which is the general colour, except on the muzzle, which is dirty white. The head is large, thick, and depressed on the top, the eyes being small, and placed so as to be above the water while the animal is swimming, and approximating to each other; the ears are small and rounded, the moustaches long and wiry, the incisor teeth large, strong, and of a fine orange yellow. Posterior to the upper incisors there is a hairy palate, or space, which makes it seem as if those teeth pierced the upper lip: the fact is, that this hairy anterior palate is thus constructed in order that the incisors, which both above and below are always exposed, may work freely on rough bark or hard materials, without injury to the palate, or that rough sticks or pieces of wood may be grasped between the palate and lower incisors and carried to the burrow. The annexed sketch from nature illustrates this curious point in the structure of the coïpus.



[Hairy Palate of the Coïpus.]

The anterior limbs are short, but very strong; the toes are five on each foot, armed with strong nails; the posterior feet are large and spreading; the toes are five in number, armed, as those of the fore-feet, with large claws; but with the exception of the outer toe, which is free, the rest are connected together by extensive webs. The tail is long, round, scaly, and very thinly clothed with stiff hairs. In size the coïpus is smaller than the beaver, but considerably larger than the ondatra, or musquash, of the northern regions of America; the living specimen which we measured (an adult male) having the head and body one foot eleven inches in length, that of the tail being one foot three inches.

Both Molina and Azzara notice the gentleness and inoffensive habits of the coïpus, and the attachment which it manifests in captivity to those who feed and caress it. It is easily domesticated, and never resents ill usage. It utters no noise unless when hurt; its voice then consists of a piercing cry. We have ascertained, by dissection, that the larynx, or rather the glottis, is received into the posterior nares, which are continued backward in the form of a funnel-like cavity; so that breathing is carried on solely through the nostrils,—a point of great importance to an animal of aquatic habits, whose under jaw and exposed teeth are beneath the surface of the water while in the act of swimming, the nostrils being just elevated above. Such a structural arrangement, however, of the larynx, precludes the utterance of definite tones, or any modu-

lation of voice, a shrill cry being the utmost that might be expected.

Much yet remains for investigation connected with the habits of this remarkable animal in its native regions. Multitudes are annually destroyed,—thousands of skins are annually imported into Europe,—but no accounts connected with the details of the history of the coïpus have, as far as we know, been transmitted with them.

In captivity the coïpus is gentle and inoffensive. The individual which came under our notice allowed itself to be handled and played with, and was evidently pleased with any marks of attention from those from whom it received its food, and with whom it was familiar. At the same time it exhibited but little intelligence: its movements were sluggish; there was nothing lively in its appearance or actions. It reminded one of a huge overgrown water-rat, divested of the alacrity which that animal displays on the banks of our ponds and rivers. Its time seemed divided between sleep or repose, and feeding; and twilight or night appeared the season of its natural activity. We must not however judge of an animal altogether by its manners in captivity. Free, and in its native regions, it is perhaps alert and watchful, quick to perceive and prompt to escape the approach of its natural enemies; while in the exercise of its instincts it fulfils its appointed part in the great plan of creation.

MOSCOW.

THE claims of Moscow to admiration have not generally been under-rated by travellers; and we have often thought that the colouring of their pictures has been considerably influenced by the direction of their journey. A traveller fresh from Europe is prepared to consider Moscow as, to a considerable extent, an Asiatic city; and if he has never been in Asia, and is not on his way thither, he dwells with admiration and wonder on its Asiatic features, which are all new to him, and to which he is perhaps induced to give an undue prominence, on account of the satisfaction which he may naturally feel in having, so to speak, travelled beyond the moral boundary of Europe. He wants materials for that comparison between Moscow and the cities, not only of Europe but of Asia, by which it seems to us that only a correct estimate of this remarkable place can be formed. The Asiatic arrangement of the houses with their appendages in detached courts, so that a line of twelve adjoining houses can scarcely be seen even in the most crowded part of the town,—the throng of unchristian-like churches, with their clustered domes of green and gold, their white towers and green spires, and their round or octangular minarets surmounted by glittering bulbous domes,—and then the endless and analogous variety of costumes and languages in the streets and places of public resort, so that it would seem as if all nations, from India to the Atlantic, were holding congress at Moscow: all these are circumstances calculated to impress and influence the most severe imagination, and to prevent that well-balanced view which it is in all cases most important to obtain.

On the other hand, the traveller who comes to Moscow on his way from Asia to Europe is enchanted by the indications of European civilization which he discovers at Moscow, and which form perhaps the first actual evidence of his approach to his own country. This feeling disposes him to regard all that is European with the utmost favour, and to give it an exaggerated importance. The buildings on the models of Greece or Rome,—the broad streets*, paved, though badly,—the lamps, though few and far between,—are things that delight him, as bringing to his mind scenes from which

* It is odd enough that Dr. Lyall regards broad streets as among the Asiatic features of Moscow!

he has long been absent: and as the houses front the streets and have sash-windows, he is in no disposition to cavil at the gay colours—white, yellow, orange, green, pink, blue, or red—with which their stuccoed fronts are covered. All is pleasing. Even the Asiatic part of the scene is grateful to him, as affording him a last glimpse of the “wild and wondrous East” from which he is departing, while at the same time the things of his own Europe form part of the same prospect. Moscow is in fact a divided empire, of which neither Europe nor Asia can say—“This is mine!”

DISEASES OF ARTISANS EMPLOYED IN WORKING IN METALS.

(Extracted from a paper on ‘The Diseases of Artisans,’ &c., in the ‘Working-Man’s Year-Book for 1836.’)

WORKERS in metals may be considered under five heads, namely, as workers in arsenic, copper, lead, mercury, and lastly, workers in gold and silver.

1. *Arsenic*.—The fumes of arsenic are extremely pernicious. “It is an artificial production, and is prepared principally in Saxony, from cobalt ores. Whilst the latter, in the crude state, are roasting for the purpose of obtaining zaffre, the vapours arising from the oxide are condensed in a long and large chamber, and to these potash is added. The mixture is then sublimed, and the white oxide is obtained, leaving potash with sulphur. This employment is a dangerous, and in a short time, fatal one; and, accordingly, convicts, whose punishment would otherwise be death, are condemned to it.”—(Beck’s Med. Jurisprudence, 3rd edit., p. 383.) The men in the copper smelting works of Wales and Cornwall are affected by the arsenical vapours arising from the crude ore, and they rely upon oil as an antidote, with which they are supplied by their employers. They are sometimes attacked with a cancerous disease, similar to that which infests chimney-sweepers. The arsenical fumes are believed to exempt them from fever. Some other artisans, as for instance, paper-stainers and glass-workers, occasionally use arsenic, and suffer headache and sickness from its employment.

2. *Copper*.—Patissier, in his ‘Treatise on the Diseases of Artisans,’ says that copper-workers have a peculiar appearance, which distinguishes them from other tradesmen; that they have a greenish complexion; that the same colour tinges their eyes, tongue, and hair, their excretions, and even their clothes, through the medium of the perspiration; that they are spare, short in stature, bent, their offspring rickety, and they themselves old and even decrepit at their fortieth or fiftieth year. And Mérat also asserts that they are liable to the painter’s colic. But Dr. Christison, from whom we have borrowed these statements, observes with great justice, that the copper-workers of the present day are by no means the unhealthy persons that Patissier represents; and he says that the painter’s colic is very rare among them.

Still they suffer from the inhalation of the metal, either oxidised or in a state of very minute subdivision; and in the founding of yellow brass there is a great evolution of oxide of zinc, which affects respiration and even digestion. The brass-melters of Birmingham state that they are liable to an intermittent fever, which they call the brass-ague, and which attacks them once a-year, or oftener, and leaves them in a state of great debility. They are in the habit of taking emetics as a preventive.

3. *Lead*.—The disease which affects house-painters, white-lead-manufacturers, and others exposed to the poison of lead, is called the painter’s colic; by medical writers it is often called *colica Pictonum*, i. e. the colic of the people of Poitou; this province in France, like Devonshire in England, having been much infested with the formidable malady in question. It was clearly shown by Sir George Baker (who wrote many valuable papers on the subject in the early volumes of the ‘Transactions of the College of Physicians’) that the disease in Devonshire arose from the use of cider which had been contained in leaden cisterns. In England the disease very rarely occurs at present, excepting among those who work in lead; in Paris, it will appear from the following extract, that a considerable number of other persons laboured under the malady; but these two things may have altered for the better since 1811. Perhaps the use of wines, sweetened

with lead, may have caused the colic in many cases. “The work of Mérat contains some interesting numerical documents, illustrative of the trades which expose artisans to *colica Pictonum*. They are derived from the lists kept at the Hospital of La Charité, in Paris, during the years 1776 and 1811. The total number of cases of *colica Pictonum* in both years was 279. Of these 241 were artisans whose trade exposed them to the poison of lead, namely, 148 painters, 28 plumbers, 16 potters, 15 porcelain-makers, 12 lapidaries, 9 colour-grinders, 3 glass-blowers, 2 glaziers, 2 toymen, 2 shoe-makers, a printer, a lead-miner, a leaf-beater, and a shot-manufacturer. Of the remainder, 17 belonged to trades in which they were exposed to copper, namely, 7 button-makers, 5 brass-founders, 4 braziers, and a copper-turner. The remaining 21 were tradesmen who worked little, if at all, with either metal, namely, 4 varnishers, 2 gilders, 2 locksmiths, a hatter, a saltpetre-maker, a wine-grocer, a vine-dresser, a labourer, a distiller, a stone-cutter, a calciner, a soldier, a house-servant, a waiter, and an attorney’s clerk.”—(Christison on Poisons, p. 421.)

Cleanliness will do much as a preventive. Dr. Christison was informed by an intelligent journeyman that the hours of labour being shorter in Edinburgh than in London, painters pay greater attention to cleanliness in the former than the latter city; and the disease in consequence is much rarer. The use of diluted sulphuric acid as a common drink has been lately tried at Paris, and, we believe, with great success; for the acid converts the carbonate into sulphate of lead, which is insoluble and harmless.

4. *Mercury*.—More than a century ago, Jussieu gave an account of the workmen in the quicksilver-mines of Almaden, in the province of La Mancha, in Spain. “The free workmen at Almaden,” he says, “by taking care, on leaving the mine, to change their whole dress, particularly their shoes, preserved their health, and lived as long as other people; but the poor slaves, who could not afford a change of raiment, and who took their meals in the mine, generally without even washing their hands, were subject to swellings of the parotids, apthous sore-throat, salivation, pustular eruptions, and tremors.”—(Christison on Poisons, p. 311.)

In this country we have no quicksilver-mines; but the trades of the silverers of mirrors and water-gilders expose them to the disease called by the French *tremblement mercuriel*, i. e. mercurial shaking. One of the cases reported by Mr. Mitchell, in the ‘London Medical and Physical Journal,’ for November, 1831, will show the nature of the disease:—“P. Nash, æt. twenty, of nervous temperament, commenced silvering six months ago; the trembling came on three days after he began to work, and his mouth was sore in six days; and he has continued to suffer, more or less, up to the present time. 14th March, 1831—The speech greatly impeded; the limbs totter when he attempts to stand or walk, which he accomplishes very slowly and with great difficulty; an infirm step and awkward gait: he is unable to convey any substance to the mouth, in consequence of the severity of the tremors; slight *subsultus tendinum* [twitching of the tendons] confined to the upper extremities; the tongue quivers; gums slightly tender; pulse strong, rather quick; appetite diminished; sleep disturbed; body wasted; he complains as if a feeling oppressed, like a load, across the lower part of the chest, or as if a substance lay at the bottom of the lungs, as he expresses himself, which he conceived to have been drawn in by inspiration; the breathing was quick, accompanied with strictured feeling and cough. He was nearly thrown from a bath by the violence of the trembling; a large quantity of the water was driven by his excessive agitation over the sides of the bath; and if two men had not held him steadily in the water, he must have been thrown out before he was capable of remaining quiet.”

A part of the noxious effects is no doubt owing to want of cleanliness; but a great part must be attributed to the mercurial vapours diffused in the air and inhaled by the workmen. How much must be owing to this latter cause may be seen from a well-known accident, which took place in 1810. Two ships of war, the *Triumph* and the *Phipps*, were bringing home a large quantity of quicksilver, when, by some accident, several of the bags burst. The whole crews of both vessels were salivated on the voyage home from Cadiz; many were dangerously ill, and two died; and the sheep, goats, dogs, cats, &c., were likewise destroyed by the gaseous poison.

What is the best method of prevention? Mérat informs us that M. Ravrio, a celebrated dealer in gilt bronze, at Paris, left by will the sum of 3000 francs (120*l.*) for the discoverer of the best method of preserving gilders from the diseases to which they are subject. The prize was given to M. Darcet, for the invention of a draught furnace, by which the destructive vapour is instantaneously removed from the workshop. Many gilders have adopted it, and, as Mérat assures us, with the desired effect. He refers us to the work which M. Darcet printed in the year 1818, entitled 'A Memoir on the Art of Gilding Bronze.'

5. *Gold and Silver.*—Workers in gold are subject to several pernicious vapours, the worst being the one which arises in the process of dry colouring, from the fusion of saltpetre, alum, and common salt. It produces great distress in the head and nervous system. These evils are aggravated by a bad posture and the foul air of crowded workrooms, so that an old jeweller is scarcely, if ever, seen. A communication made to Mr. Thackrah, by a master, is interesting and pathetic. We give it, though gloomy; as it is not by concealing the evils of trades that they are to be remedied:—

"The men drop off from work unperceived and disregarded. I am quite at a loss to know what becomes of them. When they leave off working, they go, and are seen no more. Some, perhaps, become applicants for charities; but so few have I known of the ages of sixty or seventy, that leaving work, they seem to leave the world as well, a solitary one appearing at intervals to claim some trifling pension, or seek admission to an almshouse."

Workers in silver have a tolerably healthy occupation; they suffer but little from effluvia, with the exception of some who work in badly-constructed rooms, where charcoal is burned. A master of twelve or sixteen working-silver-smiths informed Mr. Thackrah that he had two or three men in his employ between fifty and sixty years of age, and that on examining a club of 100 men, he found as great a proportion of aged as town-life commonly exhibits. He favoured Mr. Thackrah with the following general remarks:—

"Their habits are various. Say two of every dozen are rather abstemious, taking about a pint of malt liquor per day, and spirituous liquors not once a month, and live regularly. Eight of the same number are men who live well the first four or five days in the week, that is, eating meat two or three times a day, and drinking perhaps from two to four pints of beer; they then appear dull and heavy; but in the last two days they 'study Abernethy,' as we say; take perhaps no meat, and water instead of beer, which makes them as cheerful as possible, aided a little by the idea of being near the eating and drinking days. The remaining two, or one at any rate, is a regular drunkard, taking from four to eight pints of beer per day, and perhaps three or four glasses of spirits in the same time. Some of this class die at thirty, but others are in the workhouse, and live to fifty or sixty."—(Thackrah, p. 47.)

THE CANADIAN INDIANS.

(From the 'Backwoods of Canada,' by the Wife of an Emigrant British Officer. Just published in the 'Library of Entertaining Knowledge.')

A FAMILY of Indians have pitched their tents very near us. On one of the islands in our lake we can distinguish the thin blue smoke of their wood fires, rising among the trees from our front window, or curling over the bosom of the waters.

The squaws have been several times to see me; sometimes from curiosity, sometimes with the view of bartering their baskets, mats, ducks, or venison, for pork, flour, potatoes, or articles of wearing-apparel. Sometimes their object is to borrow "kettle to cook," which they are very punctual in returning.

Once a squaw came to borrow a washing-tub, but not understanding her language, I could not for some time discover the object of her solicitude; at last she took up a corner of her blanket, and, pointing to some soap, began rubbing it between her hands, imitated the action of washing, then laughed, and pointed to a tub; she then held up two fingers, to intimate it was for two days she needed the loan.

These people appear of gentle and amiable dispositions; and, as far as our experience goes, they are very honest. Once, indeed, the old hunter, Peter, obtained from me some bread, for which he promised to give a pair of ducks, but when the time came for payment, and I demanded my ducks, he looked gloomy, and replied with characteristic brevity, "No duck—Chippewa (meaning S——, this being the name they have affectionately given him) gone up lake with canoe—no canoe—duck by-and-by." By-and-by is a favourite expression of the Indians, signifying an indefinite point of time; may be it means to-morrow, or a week, or a month, or it may be a year, or even more. They rarely give you a direct promise.

As it is not wise to let any one cheat you if you can prevent it, I coldly declined any further overtures to bartering with the Indians until my ducks made their appearance.

Some time afterwards I received one duck by the hands of Maquin, a sort of Indian Flibbertigibbet: this lad is a hunchbacked dwarf, very shrewd, but a perfect imp; his delight seems to be tormenting the brown babies in the wigwam, or teasing the meek deer-hounds. He speaks English very fluently, and writes tolerably for an Indian boy; he usually accompanies the women in their visits, and acts as their interpreter, grinning with mischievous glee at his mother's bad English and my perplexity at not being able to understand her signs. In spite of his extreme deformity, he seemed to possess no inconsiderable share of vanity, gazing with great satisfaction at his face in the looking-glass. When I asked his name, he replied, "Indian name Maquin, but English name Mister Walker, very good man;" this was the person he was called after.

These Indians are scrupulous in their observance of the Sabbath, and show great reluctance to having any dealings in the way of trading or pursuing their usual avocations of hunting or fishing on that day.

The young Indians are very expert in the use of a long bow, with wooden arrows, rather heavy and blunt at the end. Maquin said he could shoot ducks and small birds with his arrows; but I should think they were not calculated to reach objects at any great distance, as they appeared very heavy.

'Tis sweet to hear the Indians singing their hymns of a Sunday night; their rich soft voices rising in the still evening air. I have often listened to this little choir praising the Lord's name in the simplicity and fervour of their hearts, and have felt it was a reproach that these poor half-civilized wanderers should alone be found to gather together to give glory to God in the wilderness.

I was much pleased with the simple piety of our friend the hunter Peter's squaw, a stout swarthy matron, of most amiable expression. We were taking our tea when she softly opened the door and looked in; an encouraging smile induced her to enter, and depositing a brown papouse (Indian for baby or little child) on the ground, she gazed round with curiosity and delight in her eyes. We offered her some tea and bread, motioning to her to take a vacant seat beside the table. She seemed pleased by the invitation, and drawing her little one to her knee, poured some tea into the saucer, and gave it to the child to drink. She ate very moderately, and when she had finished, rose, and wrapping her face in the folds of her blanket, bent down her head on her breast in the attitude of prayer. This little act of devotion was performed without the slightest appearance of pharisaical display; but in singleness and simplicity of heart. She then thanked us with a face beaming with smiles and good humour; and, taking little Rachel by the hands, threw her over her shoulder with a peculiar sleight that I feared would dislocate

the tender thing's arms, but the papouse seemed well satisfied with this mode of treatment.

In long journeys the children are placed in upright baskets of a peculiar form, which are fastened round the necks of the mothers by straps of deer-skin; but the *young* infant is swathed to a sort of flat cradle, secured with flexible hoops, to prevent it from falling out. To these machines they are strapped, so as to be unable to move a limb. Much finery is often displayed in the outer covering and the bandages that confine the papouse.

There is a sling attached to this cradle that passes over the squaw's neck, the back of the babe being placed to the back of the mother, and its face outward. The first thing a squaw does on entering a house is to release herself from her burden, and stick it up against the wall or chair, chest, or anything that will support it, where the passive prisoner stands, looking not unlike a mummy in its case. I have seen the picture of the Virgin and Child in some of the old illuminated missals not unlike the figure of a papouse in its swaddling-clothes.

The squaws are most affectionate to their little ones. Gentleness and good humour appear distinguishing traits in the tempers of the female Indians; whether this be natural to their characters, the savage state, or the softening effects of Christianity, I cannot determine. Certainly in no instance does the Christian religion appear more lovely than when, untainted by the doubts and infidelity of modern sceptics, it is displayed in the conduct of the reclaimed Indian breaking down the strong-holds of idolatry and natural evil, and bringing forth the fruits of holiness and morality. They may be said to receive the truths of the Gospel as little children, with simplicity of heart and unclouded faith.

The squaws are very ingenious in many of their handyworks. We find their birch-bark baskets very convenient for a number of purposes. My bread-basket, knife-tray, sugar-basket, are all of this humble material. When ornamented and wrought in patterns with dyed quills, I can assure you they are by no means inelegant. They manufacture vessels of birch-bark so well, that they will serve for many useful household purposes, such as holding water, milk, broth, or any other liquid; they are sewn or rather stitched together with the tough roots of the tamarack or larch, or else with strips of cedar-bark. They also weave very useful sorts of baskets from the inner rind of the bass-wood

and white ash. Some of these baskets, of a coarse kind, are made use of for gathering up potatoes, Indian corn, or turnips; the settlers finding them very good substitutes for the osier baskets used for such purposes in the old country.

The Indians are acquainted with a variety of dyes, with which they stain the more elegant fancy-baskets and porcupine-quills. Our parlour is ornamented with several very pretty specimens of their ingenuity in this way, which answer the purpose of note and letter-cases, flower-stands, and work-baskets.

They appear to value the useful rather more highly than the merely ornamental articles that you may exhibit to them. They are very shrewd and close in all their bargains, and exhibit a surprising degree of caution in their dealings. The men are much less difficult to trade with than the women: they display a singular pertinacity in some instances. If they have fixed their mind on any one article, they will come to you day after day, refusing any other you may offer to their notice. One of the squaws fell in love with a gay chintz dressing gown belonging to my husband, and though I resolutely refused to part with it, all the squaws in the wigwam by turns came to look at "gown," which they pronounced with their peculiarly plaintive tone of voice; and when I said "no gown to sell," they uttered a melancholy exclamation of regret, and went away.

They will seldom make any article you want on purpose for you. If you express a desire to have baskets of a particular pattern that they do not happen to have ready made by them, they give you the usual reply of "by-and-by." If the goods you offer them in exchange for theirs do not answer their expectations, they give a sullen and dogged look or reply, "*Car-car*" (no, no), or "*Carwinni*," which is a still more forcible negative. But when the bargain pleases them, they signify their approbation by several affirmative nods of the head, and a note not much unlike a grunt; the ducks, fish, venison, or baskets, are placed beside you, and the articles of exchange transferred to the folds of their capacious blankets, or deposited in a sort of rushen wallets, not unlike those straw baskets in which English carpenters carry their tools.

The women imitate the dresses of the whites, and are rather skilful in converting their purchases. Many of the young girls can sew very neatly. I often give them bits of silk and velvet, and braid, for which they appear very thankful.



[Papouses.]

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THE BETEL-NUT TREE.



[Betel-Nut Tree.]

THE betel-nut tree (*areca catechu*, LINN.) is one of the most graceful of the palm tribe. It is a native of all the countries of Asia within the tropics, and is cultivated all over India for the sake of the nut, which is in high esteem. It is known by a variety of names, each language having a distinct term for it, every one of which is native. Crawford tells us that it is an indigenous product of all the Indian islands; but Dr. Roxburgh says that he does not know where it grows wild. The islands of the Indian Archipelago, and the lands of the continent near to the coast, are most favourable to its growth; there it requires least care and expense in the cultivation, bears fruit on the fifth year, and dies about the twenty-fifth year. But in many parts of the continent it does not arrive so soon to maturity, bears fruit for a much longer period, and is of course much longer in decaying. But in this latter case the cultivation is attended with considerable care and expense. Dr. Francis Buchanan, whose 'Journey through Mysore, Canara, and Malabar,'

contains many interesting particulars respecting the culture of the betel-nut tree, tells us, in one place, that the tree begins to bear fruit at five years, and lives from thirty to forty years; and in another place, that it does not begin to bear fruit until from eight, nine, twelve, and fifteen years; that it bears for sixty or seventy years, but that when it has been twenty-five or thirty years in perfection it begins to decay. The tree is in flower most part of the year; its trunk often rises from forty to fifty feet high, but is in general only about twenty inches in circumference, almost equally thick and smooth. The nut is about the size of a hen's egg, inclosed in a membrane covering, and of a reddish yellow when ripe. The tree has no branches; but its leaves are very beautiful, forming a round tuft at the top of the trunk. There are two crops in the year; the quantity of nuts yielded by a single tree varies considerably in different places: on the Coromandel coast the average number of nuts obtained from a single tree is usually about 300.

The betel-nut is dried, cut into slices, usually four; these slices are wrapped up in the leaf of the black-pepper vine, and sprinkled with quicklime, termed by the natives *chunam*. Thus prepared it is chewed, and is enjoyed by the people as a universal luxury. What the benefits are to be derived from this preparation it would be hard to say. The nut, which has a harsh astringent flavour, is never eaten by itself; but in conjunction with the hot pungent leaf of the black-pepper vine and the quicklime, it is much relished. The chewing of the betel provokes much spitting of a reddish-coloured saliva; and the Indians have an idea that by this means the teeth are fastened, the gums cleaned, and the mouth cooled:—so Dr. Ainslie says. The modern Arabs, while they occasionally chew the betel-nut in the same manner as the Indians do, give a preference to the buds of a plant which they call *kad*, and which they think sweetens the breath and preserves the gums. Besides being greatly cultivated in India, the betel-nut is brought thither from Borneo, Malacca, and Cochin-China. An apparently more rational, but very limited, use of the betel-nut than in being chewed is its employment in dyeing. A red variety is commonly used in Malabar for dyeing that colour. However, the use of the betel-nut in chewing is probably as defensible as that of tobacco.

“I tried,” says the late Bishop Heber, “chewing betel to-day, and thought it not unpleasant, at least I can easily believe that, where it is fashionable, people may soon grow fond of it. The nut is cut into small squares and wrapped up in the leaf [the leaf of the black pepper-vine] together with some *chunam*. It is warm and pungent in the mouth, and has the immediate effect of staining the tongue, mouth, and lips of a fiery orange colour. The people here fancy it is good for the teeth, but they do not all take it. I see about half of the crew [of the vessel in which Heber was sailing up the Ganges] without the stain on their lips, but I do not think the teeth of the other are better.

“The betel is a beautiful tree, the tallest and slenderest of the palm kind, and with a very smooth white bark. Nothing can be more graceful than its high slender pillars when backed by the dark shade of bamboos and other similar foliage.”

Dr. Ainslie says, that the betel-nuts, when young and tender, are, in conjunction with other articles, occasionally made into decoction, and prescribed for such people as suffer from dyspepsia.

We are told by Forbes (Oriental Memoirs) that the *chunam*, or delicate shell-lime, which is spread over the betel, is carried by the natives in boxes, and that the betel is chewed at all hours. In some parts of India, however, as in Canara, in place of quicklime, they use the ashes of the bark of a common tree. On visits of ceremony the betel is introduced, the leaf in which it is inclosed being fastened with a clove, it is presented to the guests on a salver, and is a signal of taking leave.

The black-pepper vine-leaf, or betel-leaf, as it is termed, in which the dried slices of the betel-nut are inclosed, is very much cultivated in India, principally for the purpose of being eaten with the nut. On the Malabar coast, and in other parts of India, the vines are usually trained up the betel-nut-tree, “which,” says Dr. Roxburgh, “renders it more particularly useful in those parts.” But in other places it is a separate and special object of cultivation.

The betel-nut-tree was introduced into the island of Jamaica in the year 1793. Lunan, who makes this statement in his ‘*Hortus Jamaicensis*,’ says that the dried betel-nut, when eaten by itself, impoverishes the blood, and causes jaundice; but it is not attended with those inconveniences when mixed with betel,—by which he means when eaten with the pepper-vine leaf, and with quicklime or *chunam*. The quicklime undoubtedly corrects or neutralises the acidity of the nut.

“The tree is propagated,” says Crawford, “from the ripest seeds or fruits, first sown in beds and afterwards transplanted. It thrives in ordinary soils and in all situations; but the neighbourhood of the sea is conducive to the perfection of the fruit; and the warmer and lower the land the more rapidly does the tree advance to maturity.”

THE KNIGHT'S TEMPLARS.—No. III.

NOTWITHSTANDING all this bloodshed, the fate of the Templars was not yet formally sealed. For that purpose it was deemed expedient to summon a general council of the church, which met accordingly on the 13th of October, 1311 (just four years after the general arrest of the order) at Vienne in Dauphiny. The proceedings which followed were of a most extraordinary description. All who desired to defend the denounced community having been solemnly cited to appear, nine knights presented themselves before the assembled fathers, stating that they were deputed by from fifteen hundred to two thousand of their brethren, who, having escaped at the era of the first attack upon their order, had ever since been wandering about as fugitives among the mountains in the neighbourhood of Lyons, and that they were ready to defend the common cause against all assailants. They offered themselves for this purpose, they said, under the safeguard of the public faith, and of the special permission which had been granted by the Pope, and proclaimed throughout Christendom. These brave chevaliers had thrown themselves into the lions' den. Scarcely had they declared their mission, when, by Clement's order, they were seized, thrown into prison, and loaded with irons. The pontiff himself states the fact in a letter dated the 11th of November, addressed to his confederate, King Philip.* This act of atrocious perfidy excited the general indignation of the council, and many of the members did not scruple to give expression to what they felt. On being called upon to decide whether or no the accused should be heard in their own defence (a strange question for debate, it may be thought, in any circumstances, and especially after the steps which had already been taken in the present case, all the prelates of Italy, with one exception, all those of France, saving the Archbishop of Rheims, of Sens, and of Rouen, and all those of Spain, of Germany, of Denmark, of England, of Scotland, and of Ireland, gave their votes in the affirmative. On this decision Clement immediately declared the session terminated, and the council adjourned to the 3rd of April, 1312.

Meanwhile in the beginning of February, Philip himself suddenly made his appearance in Vienne, accompanied by his three sons, his brother, and a numerous suite. The Pope soon after re-assembled the cardinals, and a select portion of the prelates in secret consistory, and there by his own authority pronounced the abolition of the order. The second session of the council opened on the day appointed, when seated on the Pope's right hand appeared the King of France, surrounded by his brother, his sons, and an imposing array of military. On the 2nd of the following month, in this august presence, Clement simply read to the assembly the decree by which he had declared the order of the Templars abolished, and to which the holy fathers listened in silence, no one deeming it expedient to express either dissent or approbation.

There now remained only the closing scene of this long tragedy. On the 18th of March, 1314, the Grand Master and three of the other chiefs of the order, who had formerly made confession, were brought from their prisons, in which they had now been shut up for more than six years, and placed upon an elevated stage,

* See the letter in the original Latin in Raynouard, pp. 177, 178.

erected before the porch of Notre Dame, at one extremity of which were seated the Archbishop of Sens and several other ecclesiastics as their judges, while the court all around was filled with the multitude. No form of trial was gone through, but it was intimated to the knights that in consequence of the contrition which they had shown in acknowledging their guilt, they were sentenced only to perpetual imprisonment. On hearing this doom, the Grand Master, calling upon all present to listen to his words, spoke with a loud voice to the following effect: "It is right that in these the last moments of my life I should proclaim the truth. I declare, therefore, in the sight of heaven and of earth, that, to my eternal shame, I have indeed committed the greatest of crimes, but it was only when I acknowledged those with which so black a malevolence have been attributed to our order: I attest, as the truth obliges me to do, that it is innocent. I declared the contrary only to suspend the excessive agonies of the rack, and to obtain the forbearance of my torturers. I know the penalty that awaits me for what I now utter; but the frightful prospect presented to me by the fate of many of my brethren shall not tempt me again to confirm my former lie by another; the life offered me on so infamous a condition, I renounce without regret." The emotion with which the spectators heard this address burst from the lips of the throng in a murmur of applause. One of the Grand Master's three companions, Guy, commander of Normandy, the brother of the Earl of Auvergne, immediately expressed his assent to what had been spoken by his chief. The two brave chevaliers were not left long in doubt as to their fate. The king's council having instantly met, condemned them both to the flames; and that same evening they were burned together at a slow fire on the southmost of the two small islands in the Seine which then lay to the west of the Isle de la Cité, but which have since been joined to it. They endured their sufferings with heroic composure, and with their latest breath repeated their protestations of the innocence of their order. The spectacle excited in an extraordinary degree the pity and admiration of the people; and contemporary writers inform us that during the night many persons repaired to the spot where the two martyrs had perished, and gathered their ashes for the purpose of preserving them as holy relics.

Such is the melancholy story of the destruction of this renowned association, the chiefs of which had so long ranked almost with the princes of the earth. The order of the Templars was abolished at the same time in most of the other countries of Europe, although in none were the same cruelties inflicted upon the members as in France. Although dispossessed of their property they were no where else either put to death or persecuted; and in some countries, as in our own, an asylum was provided for most of them in the monasteries after they were turned out of their own establishments. In France, as soon as the order was dissolved, their houses and other possessions were seized by the king and the pope; and although the palace of the Grand Master, with its furniture and other portions of the confiscated property, were afterwards granted to the Hospitallers of St. John of Jerusalem (since more generally known by the name of the Knights of Malta), it is asserted that the latter paid the full value for their new acquisitions. The chief actors in this work of robbery and murder did not long survive their victims. Clement died suddenly within six weeks after the execution of the Grand Master; and Philip was killed by a fall from his horse before the expiration of the year. Under the influence of not an unnatural superstition, it became a popular article of faith that De Molay, while consuming at the stake, had summoned these his two powerful persecutors to meet him at the judgment-seat of heaven within the short

periods to which their days on earth were actually extended. But the most strikingly retributive doom was that which befel the minister Marigny, the chief adviser and instrument of his sovereign in these execrable proceedings. Deprived by the death of his royal master of the protection which had enabled him to defy the envy of his rivals, the ex-favourite was assailed by a powerful combination, at the head of which was the Count de Valois, the uncle of the new king (Louis X.) driven from his post at court, and eventually with many of his friends and connexions seized and thrown into prison. The prison to which he and his companions were consigned was the Temple. After lying here for some time loaded with irons, to force them to confess the crimes with which they were charged, they were put to the torture. But the imputations under which the malice of his enemies was now labouring to overwhelm Marigny were, there is every reason to believe, as unfounded as those by which he and his master had formerly accomplished the ruin of the Templars; and, although they endured indescribable agonies, the required acknowledgment could not be extorted from any of the sufferers. Still the unfortunate man was detained in custody, "shackled," says a contemporary chronicler, "with good bands and rings of iron, and right diligently guarded." At length, a new accusation was pointed against him, and in that age the most terrible of all others. He was charged with being a sorcerer, and with having in that capacity attempted to bring about the deaths of the king and other distinguished persons by fashioning images of them in wax, and then stabbing them with pins. With what bitter remorse must Marigny have remembered the share he had had in the persecution of the Templars, when he found his own life thus about to fall a sacrifice to imputations so similar to those of which he had availed himself to destroy them! Upon this wild accusation he was actually condemned to be hanged; and he underwent his sentence on the gibbet of Montfaucon, which he had himself caused to be erected.

It is a curious fact, that the order of the Knights Templars, although despoiled of its possessions, has never after all been extinguished in France, but still exists in Paris in the form of a society which has been continued by unbroken succession from the time of the great persecution of which we have given an account. This society, which still retains the name of the order of the Knights of the Temple, is actually at this day in possession of a variety of documents which had belonged to the community at the era of its dispersion, and especially of a Greek manuscript volume in the handwriting of the twelfth century, which contains, among many other precious evidences, the original record of the foundation of the order, and the golden table, or list of the Grand Masters. That dignity, it appears, has never been vacant since the time of Jacques de Molay, he having before his death transferred it to John Mark Larmenius of Jerusalem, by whom it was in like manner made over in 1334 to Francis Theobald or Thibaut of Alexandria, by a charter written in the Latin tongue, which is still preserved in the archives of the society. In 1340 it was resigned by Theobald into the hands of Arnold de Bracque, a member of a very distinguished French family of those times; and from him it has descended through an uninterrupted line of successors, all French, and many of them of illustrious rank, to our own day. In 1825, the Grand Master was Doctor Bernard Raymond Fabr -Palaprat. Among other relics which the society possess are the sword of Jacques de Molay, and some fragments of burned bones enveloped in an ancient linen handkerchief, which are said to have been gathered from among the ashes of the fire in which that unfortunate chief was consumed*.

* See DuJaure, Histoire de Paris, viii. 121.

THE CHEESEWRING, KILMARTH ROCKS, AND TREVETHY STONE, CORNWALL.



[The Cheesewring, as seen from the North-west.]

THE Cheesewring is a natural pile or combination of rude granite rocks, in the parish of St. Cleer, Cornwall, between Liskeard and Launceston. It rises to the height of thirty-two feet, and stands near the top of a high hill. The stones are placed one upon another; and from the shape of the pile probably resembling an ancient cheese-press, the name appears to have been derived. It consists of eight stones, of which the upper ones are so much larger than those below, and project so far over the middle and base, that it has for many generations excited astonishment how so ill-constructed a pile could have resisted the storms of such an exposed situation. Some art may possibly have been used in reducing the size of one of the central stones, and in

clearing the base from circumjacent rocks, but otherwise this curiosity is entirely a work of Nature.

On the same hill are several other similar piles of granite rocks, but not one of them is so singular in its relative proportions. One stone is of the enormous measurement of eleven yards in length, nine yards in breadth, with an average thickness of little more than two feet. The shape of the hill is that of a truncated cone, the diameter of the summit being about 100 yards. Round this flat summit is an immense number of small stones, piled up to form a rampart, and probably used in olden times both for defence and for attack on assaunders. Within the circle are many large masses of rocks, with small excavations on the tops of



[Kilmarth Rocks, as seen from the South-east.]

them called "rock-basins," formed, in all probability, by the natural decomposition of the granite, under the united action of the sun, rain, and wind. Detached granules of the stone, and others which may be loosened by the finger, are generally found at the bottom of these basins, and attest their most frequent origin, though others may have been partly formed by man, to supply his thirst or to perform his sacrifices.

The Kilmarth Rocks are a lofty range of half a mile in length, running east and west, about two miles northward from the Cheesewring, and in the parish of Linkinhorne, Cornwall. The westernmost pile, represented in the sketch, stands on the summit of this elevated ridge, and is in itself about twenty-eight feet high. It overhangs at least twelve or fifteen feet towards the north, and when viewed from the east appears so slightly based, that a man or a strong gale might suffice to shove the whole mass over the tremendous precipice; but when surveyed from the western side its foundation appears more solid, and it will require perhaps many ages to subvert the wonderful pile. The immense size of many of the granite rocks of which this ridge is formed, and the rude and heterogeneous manner in which they lie one upon another, together with the wildness and extent of the surrounding pa-

norama, overpower the mind with awe and astonishment at the grandeur of the operations of Nature. Towards the north is seen the top of Launceston Castle, also, in clear weather, the Bristol Channel and Lundy Island; to the south-east Plymouth, its Sound, and Mount Edgcumbe; and towards the south-west the Deadman Point and the English Channel, with the bleak midland hills of Devonshire and Cornwall. A large rock-basin, of about three feet in diameter and one foot deep, is on the summit of one of the eastern rocks of Kilmarth.

Trevethy Stone is a fine cromlech in the parish of St. Cleer, near Liskeard, Cornwall. The term *Trevedi* is said to signify, in the British language, *the place of graves*, and its object was in all probability sepulchral. The stones are all of granite: six of them are upright, and one large slab covers them in an inclined position, with another reclining under it. The dimensions of the uppermost stone are about twelve feet by eight and a-half feet, and one foot in thickness. No tradition exists as to the time when this monument was erected, but its name at once designates it to have been the work of the ancient Britons. It stands on a barrow, upon the summit of a hill. A good vignette of this cromlech may be seen in the frontispiece to one volume of 'The Beauties of England and Wales.'



[Trevethy Stone.]

ALFRED—BRUCE—WASHINGTON.

THE most elevating passages in the history of our race are those national resurrections, as we may call them, in which the popular spirit that had seemed extinguished has suddenly shot up again into a blaze, and the cause of liberty or independence, after having been given up for lost by almost all men, has yet been raised from the dust and set on high by one man's patriotism, which no despair could quench. Even if human life were a mere game, every such rebound of a people from depression and degradation would be pregnant with interest and excitement. But the occasion is always one on which far higher qualities are called into exercise than mere skill and dexterity, or any kind of talent or knowledge: ability, great and varied, there must be, of course; but the sustaining inspiration of the effort is always the moral grandeur and strength which

the crisis develops, both in individuals and in the heart and soul of the nation. Of all the other means and resources by which contests among men are influenced and decided, there is generally more store in the hands of the established tyranny, than in those of the young power that attempts to throw it down; there is no reason, at least, why the counsellors and generals of the former should not be fully the equals of those of the latter in political wisdom and in military science, while with armies, and the whole material strength of war, they are likely to be much more plentifully provided. If the issue therefore depended solely or chiefly upon the conflict either of physical or of intellectual elements, the chances would always be greatly against the success even of the most righteous insurrection. But the life and best might of such a cause lie in a higher principle than that either of physical force or intellectual capacity. "Twice is he armed," it has been truly said, "that

hath his quarrel just;" besides the blessing of heaven that may in that case be deemed to go with him, his sense of his quarrel's justice is as good to him as another right hand, and braces every sinew to double vigour. On this side, too, every thing is at stake. The struggle is not for mere power or glory, but for existence itself, or for all that makes existence dear—for air to breathe, or for the decision of the question, whether the breath that is drawn shall be life or poison. Hence the care, and vigilance and activity, of leaders and followers, the circumspection and economy in all things, the quick seizure of every advantage, the great deeds that are achieved, the important ends and objects that are gained, with the scantiest means. Hence a perseverance to the death, an endurance whose nerve toils and hardships only harden and strengthen. And not new energies only are called forth in all engaged in the solemn enterprise; it infuses something of its own majesty into each, and elevates his whole mind and nature;—

"Then
Gods walk the earth, or beings more than men!"

Such a contest, crowned with victory, never fails to leave behind it a certain nobility of blood and character to the people which has so worked out its freedom.

It is cheering also to observe how often it has happened that a national regeneration of this kind has been essentially the work of but a single individual. The circumstances no doubt in all such cases may be said to have called forth the man, and also to have provided him with the means of accomplishing what he did; but still, without the man to turn them to account, the circumstances would have existed to no purpose. They were at most the ready instruments, which, with all their aptitude, would have lain dead and useless had they not been taken up and wielded by his living hand. It is cheering, we say, to perceive in this way what one man can do. It helps to keep alive that faith in himself which each of us is somewhat in danger of losing in a highly artificial state of society, when the individual seems to be wholly swallowed up in the throng, like a drop of water in the ocean; and all operations seem to be carried on, and all effects to be wrought by the movements of men in masses. This state of things is attended with great conveniences and advantages; and it is, besides, the inevitable result of advanced civilization: so that, even if its advantages were less than they are, it would be in vain to struggle against it; but that is no reason why we should not resist, and gladly avail ourselves of whatever helps us better to resist any depressing tendency it may have in the direction we have mentioned. Nothing could be conceived better fitted to train mankind to any yoke of bondage to which it might be attempted to subject them, than the extinction of all strong belief in the efficacy of individual exertion, and the general diffusion among us of the conviction that each individual in the system of society was no better than one of the units of a battalion, or a helplessly revolving spoke in one of the wheels of a great machine.

Of the modern European communities almost every one has, at one period or another of its existence, been served and saved in the manner of which we have spoken. Thus Spain has had her Pelayo, Switzerland her Tell, France her Maid of Orleans, Portugal her Alfonso Henriques, Holland her William of Orange. But of all such illustrious deliverers whom modern history records, there is no other, we think, who can be placed before, or, all things considered, even by the side of the three names we have prefixed to this article, the English Alfred, the Scottish Bruce, and the American Washington. None certainly ever had more formidable difficulties to contend with—a cause at a lower point of depression at the moment when it was

taken up—or a more fearful superiority of force and resources against which to make head. None ever derived less assistance from accident, or panic, or superstition, or any sudden outburst of popular enthusiasm, or owed everything more entirely to themselves alone,—to their strength of heart and hope, that never failed—to their sagacity—to their prudence—to their watchfulness—to their patience—to their heroism—to their military skill—to all those qualities, in short, which go to the conduct of great enterprises, and to a man's command over others and over himself. And, lastly, none ever succeeded more triumphantly: the deliverance from foreign domination which each effected for his country was complete; he reinstated it in tranquillity, in independence, and in power; and each lived to preserve in peace what he had won in war, and display, after he had sheathed the sword, a still higher genius and patriotism as a civil governor and legislator.

Factory Labour.—Of all the common prejudices that exist with regard to factory labour, there is none more unfounded than that which ascribes to it excessive tedium and irksomeness above other occupations, owing to its being carried on in conjunction with the "unceasing motion of the steam-engine." In an establishment for spinning or weaving cotton, all the hard work is performed by the steam-engine, which leaves for the attendant no hard labour at all, and literally nothing to do in general; but at intervals to perform some delicate operation, such as joining the threads that break, taking the cops off the spindles, &c. And it is so far from being true that the work in a factory is incessant, because the motion of the steam-engine is incessant, that the fact is, that the labour is not incessant on that very account, because it is performed in conjunction with the steam-engine. Of all manufacturing employments, those are by far the most irksome and incessant in which steam-engines are not employed, as in lace-running and stocking-weaving; and the way to prevent an employment from being incessant, is to introduce a steam-engine into it. These remarks certainly apply more especially to the labour of children in factories. Three-fourths of the children so employed are engaged in piecing at the mules. "When the carriages of these have receded a foot and a half or two feet from the rollers," says Mr. Tufnell, "nothing is to be done, not even attention is required from either spinner or piecer." Both of them stand idle for a time, and in fine spinning particularly, for three quarters of a minute or more. Consequently, if a child remains at this business twelve hours daily, he has nine hours of inaction. And though he attends two mules, he has still six hours of non-exertion. Spinners sometimes dedicate these intervals to the perusal of books. The scavengers, who in Mr. Sadler's report have been described as being "constantly in a state of grief, always in terror, and every moment they have to spare stretched all their length upon the floor in a state of perspiration," may be observed in cotton-factories idle for four minutes at a time, or moving about in a sportive mood, utterly unconscious of the tragical scenes in which they were dramatized. Occupations which are assisted by steam-engines require for the most part a higher, or at least a steadier species of labour, than those which are not; the exercise of the mind being then partially substituted for that of the muscles, constituting skilled labour, which is always paid more highly than unskilled. On this principle we can readily account for the comparatively high wages which the inmates of a factory, whether children or adults, obtain. Batting cotton by hand for fine spinning seems by far the hardest work in a factory; it is performed wholly by women, without any assistance from the steam-engine, and is somewhat similar in effort to threshing corn; yet it does not bring those who are engaged in it more than 6s. 6d. weekly, while close by is the stretching-frame, which remunerates its tenters or superintendents, women, and even children fourteen years old, with double wages for far lighter labour. In power-loom weaving also, the wages are good, and the muscular effort is trifling, as those who tend it frequently exercise themselves by following the movement of the lay, and leaning on it with their arms. It is reckoned a very healthy mill-occupation, as is shown by the appearance of the females engaged in it, in every well-regulated establishment in England and Scotland.—(Dr. Ure's 'Phil. of Manufactures.')

A REMARKABLE DUEL IN 1664.

[From a Correspondent.]

WITH the exception of the celebrated *Disfida*, or Challenge of Barletta, in 1503, which induced thirteen Italian knights to fight as many French knights for the honour of their country, no duel in the kingdom of Naples ever made so much noise as that between the Count of Conversano and the Duke of Martina, which took place in the following century. Mr. R. Keppel Craven, in his amusing 'Tour through the Southern Provinces of the Kingdom of Naples,' has given a history of this rencounter. I shall make use of his narrative, taking, however, the liberty of correcting a few trifling mistakes in it, which I am enabled to do from the circumstances of having been intimately acquainted with the descendants of both of the noble houses, and having lived some time in the province where the events took place, which are still preserved in local tradition. The details, as Mr. Craven remarks, are strongly indicative of the temper and manners of the times. They carry a valuable lesson with them, and expose the fallacy of the notion of the honour and happiness of the "good old times."

"The management of the sword," says Mr. Craven, "as an offensive and defensive weapon, was at that period not only considered as the most fashionable and manly accomplishment which a nobleman could possess, but was generally practised by all ranks of persons; for it is noted that, even at a less remote era, the fishermen of Taranto, after their daily labours, were wont to meet in the evening, and resort to the recreation of fencing. The barbarous custom of duelling, maintained in its full force by false notions of honour and prerogative,—the inefficiency of the laws, and the errors of feudal institutions,—contributed, no doubt, to ennoble this sanguinary art, and extend the prevalence of its exercise throughout the realm."

It was in these turbulent times that the Neapolitans acquired the character of being the best swordsmen in Europe,—a reputation they have never lost,—though in modern times their duels, though frequent enough, have very seldom been murderous. The first drawing of blood settles the business; and it is rare (among gentlemen) that anything more than a scratch or a prick is given or received. It was far different with their ancestors, the Acquavivas, the Imperiali, the Pignatelli, the Caraffas, the Galestas of the olden times.

The Count of Conversano, Marquis of Le Noci and Duke of Atri, of the most ancient and noble family of Acquaviva, and the Prince of Francavilla, of the family of Imperiali, were the two most powerful barons in Lower Apulia. The count, who came of a haughty and fierce race, was proud of his ancient descent, his numerous titles and royal connexions. One of our Norman princes, on his return from the Holy Land, on passing through Apulia, was entertained at the castle of Conversano, where he became enamoured of a daughter of that house and married her. Besides their immense possessions in Apulia, as dukes of Atri, the Acquavivas were lords of nearly one-half of the Abruzzi; and in the sixteenth century they could travel for days without passing the boundaries of their own territory, on which they exercised all the rights and privileges of feudal lords.

Some of their numerous castles were in extent and magnificence like royal residences. The stabling attached to the castle of Atri, in the Abruzzi, had 200 stalls; and tradition reports that these used always to be filled, the old barons never riding out without a band of dependent knights, squires, and pages, who were all mounted on steeds sprung from the noble breed that belonged exclusively to the counts of Con-

versano. Branksome Hall and the splendour of the house of Buccleugh were nothing to this!

Nine-and-twenty knights of fame
Hung their shields in Branksome Hall;
Nine-and-twenty squires of name
Brought them their steeds to bower from stall;
Nine-and-twenty yeomen tall
Waited, duteous, on them all:
They were all knights of mettle true,
Kinsmen to the bold Buccleugh*.

The breed of horses which we have mentioned was ancient, and almost entirely of pure Arab blood. This noble stud was one of the last things the falling family parted with; but it was broken up, dispersed, mixed, and lost, in the course of those disastrous revolutions in Italy consequent on the French Revolution, and which completed the ruin of the ancient aristocracy of Italy. I have had the somewhat melancholy satisfaction of riding a mare of the pure Conversano breed,—*l'ultimo avanzo*, the only remains of the stud which the present count-duke had retained. She was old, but still a superb animal. The head, neck, eye, the long, springy fetlock, the clean legs, the setting-on of the tail, were all truly Arabian; and even age had not cooled her spirit or slackened her speed.

Mr. Craven describes the old Acquavivas as being tyrannical and violent—a race dreaded by their inferiors, and hated by their equals. I am afraid there is a good deal of truth in this, but he ought to have added that they were rather magnanimous tyrants, exceedingly courageous, entertaining high notions as to the point of honour, and never crafty or treacherous. In the course of the invasions, revolutions, and counter-revolutions to which the kingdom has been a prey in all ages, they shed their blood freely on the field for the party they espoused, which was generally the national and patriotic one. In several instances they conferred inestimable benefits on their country.

The Count Girolamo, the unfortunate hero of the tale we are to relate, took a distinguished part in the suppression of the insurrection at Naples, in 1647, when Massaniello entirely overthrew the authorities of the city, and seated himself for a few days upon the throne of Naples.

The Prince of Francavilla, of the stock of the Imperiali, hated the Count of Conversano with a most cordial hatred, and as they were neighbours in Apulia, their territories adjoining, they had plenty of opportunities for quarrelling. At first the fiery Count Girolamo affected to despise the prince as a foreign and low-born intruder; but the Imperiali, who were of Genoese extraction, had the quality, common to the people of Genoa, of economy and money-saving, and the prince was enormously rich in specie; while his neighbour, with five times the extent of lands, had very seldom many ducats in his castle, where hospitality was exercised on a gigantic scale, and everything managed without any attention to expense. The command of ready money gave the prince several advantages over the count. This stung Acquaviva to the very soul, and he declared to his retainers that it was too hard that a dirty, stingy Genoese, of no antiquity or nobility of family—a fellow who had only come into the kingdom with Charles V.—should be allowed to beard the Count of Conversano in Apulia, where he and his ancestors had been lords for centuries. Words like these stung the prince and quickened his hatred, for he was as proud as the count, and very jealous of family honours—the more so, perhaps, because there was truth in Acquaviva's taunt, and because his family name Imperiali (the Imperialist) seemed to denote that he was one of the Italians who only in the pre-

* Lay of the Last Minstrel.

ceding century attained rank and wealth by attaching themselves to the Emperor Charles V. Their territories, as we have said, joined, and the constant litigations arising out of their inordinate but ill-defined jurisdictions, were all superadded to the long list of mutual injuries recorded by both families. After quarrelling all their lives, they came to blows when they were both old men. The crisis happened in the capital one day as each of the noble rivals was driving in his carriage. After a long contest of words, the Count of Conversano said, all this must end—that one of them must die, in order that the other might live in peace, and formally challenged the prince. The prince knowing his opponent to be one of the best swordsmen in the kingdom, put forward his age and infirmities, and declined the combat with swords; but Mr. Craven is in error when he says that he offered to fight with pistols. Fire-arms were never used on such occasions in Italy, where the rapier was always considered as the only weapon for a cavalier. In order to force his rival to the field, Conversano leaned over his carriage, and struck him repeatedly with the flat side of his sword.

“An insult,” says Mr. Craven, “so grossly offered in the public streets authorized the government to suspend or check the consequences likely to arise by placing the aggressor under arrest for a time, and subsequently it ordered them both to retire to their respective estates. But the feelings of unsatisfied hatred in the one, and of insulted pride in the other, were not likely to be allayed by this exclusion from the world; and in a short time the Prince of Francavilla proposed a champion in his cause, in the person of his sister’s only son, the Duke of Martina, of the house of Caraccioli.”

The count admitted the substitution of this youthful adversary, and even agreed to a year’s delay, in order that the duke might “finish his education;” by which, I suppose, is meant, that he might perfect himself in fencing. The day was named, and the field of battle fixed at Ostuni, a small town in Lower Apulia, the jurisdiction of which had been furiously disputed by both noblemen. Dark hints of this singular duel got abroad, and the eyes of the whole kingdom were turned anxiously to the spot. In these matters people always select a favourite, and as the duke was young, handsome, accomplished, and of a cheerful disposition, he carried away nearly all sympathy from the gloomy old count, who, however, so high was his fame as a swordsman, was considered by every one as the sure victor.

“The Prince of Francavilla, actuated more by the apprehension of shame in the event of defeat, than by feelings of affection for his nephew, endeavoured to insure success by the following stratagem:—A gentleman who had been some time, as was the custom in those days, a retainer in his family, left it abruptly one night, and sought the Count of Conversano’s castle, into which he gained admission by a recital of injurious treatment and fictitious wrongs heaped upon him by the tyrannical and arbitrary temper of the Prince of Francavilla. A complaint of this nature was always a passport to the count’s good graces, and he not only admitted this gentleman to the full enjoyment of his princely hospitality, but having found that he was a dexterous swordsman, passed most of his time in practising with him that art, which he hoped would soon insure the triumph he valued most on earth. A few days previous to that fixed for the duel, the guest, under pretence of paying a visit to his relatives, withdrew from the Count of Conversano’s territories, and secretly returned to those of his employer, where he lost no time in communicating all the peculiarities and advantages repeated experience had enabled him to remark in the

count’s manner of fencing. The Duke of Martina was thereby taught that the only chance of success which he could look to, was by keeping on the defensive during the early part of the combat: he was instructed that his antagonist, though avowedly the most able manager of the sword in the kingdom, was exceedingly violent, and that if he could parry the thrusts made on the first attack, however formidable from superior skill and strength of wrist and arm, he might perhaps afterwards obtain success over an adversary, whose person, somewhat inclined to corpulency, would speedily become exhausted from the effects of his own impetuosity. The Duke of Martina, furnished with this salutary advice, and strong in the conviction of what he considered a just cause, awaited in calm anxiety the day of battle; and the behaviour of the two combatants on the last morning strongly characterizes their different dispositions, as well as the manners and habits of the age they lived in. The Duke of Martina made his will, confessed himself, and took an affectionate leave of his mother, who retired to her oratory to pass in prayer the time her son devoted to the conflict; while, on the other hand, the Count of Conversano ordered a sumptuous feast to be prepared, and invited his friends and retainers after the fight; he then carelessly bade his wife farewell, and alluding to his adversary’s youth and inexperience, said, *Vado a far un capretto*. (I am going to kill a kid, or, literally, to make a kid.) They met at the place appointed: it was an open space before a monastery of friars at Ostuni; but these good fathers, by their intercession and prayers, prevailed upon the combatants to remove to another similar plot of ground, in front of the Capuchin convent in the same town; here the bishop and clergy, carrying the Host in solemn procession, attempted in vain to dissuade them from their bloody purpose: they were dismissed with scorn, and the duel began. It was of long duration, and afforded the duke an opportunity of availing himself of the counsels he had received: when he found the count began to be out of breath, and off his guard, he assumed the offensive part, and having wounded him, demanded if he was satisfied, and proposed to desist from any further hostility; but, stung to the quick by this unexpected reverse, the count refused all offers of accommodation, and by blind revenge, and redoubled animosity, soon lost all command of himself, and received a second wound, which terminated the contest, together with his life.”

It was quite as well, or perhaps it was much better, that the count died in the duel, for the subtle and cowardly Prince of Francavilla, fearing that in spite of all his precautions his nephew might fall, had posted a strong band of assassins to waylay and murder Conversano on his road home, had he come off victorious at Ostuni.

The sword with which the fatal duel was fought, a long and very heavy rapier of Spanish make, and with a Spanish motto inscribed along the blade, is, or was, a few years ago, in the Count of Conversano’s small but curious collection of old arms at Naples, in the Palazzo Stigliano Colonna.

Heritable Qualities.—Physical or natural qualities are most strictly inherited in the inferior realms of creation. Thus we observe an unvarying transmission of instincts, properties, and impulses in the animal kingdom, see them less strictly inherited in the human race, and least of all so in the highest grades of intellectual existence. The products become more free and independent as the scale rises.—*Characteristics.*

** The Office of the Society for the Diffusion of Useful Knowledge is at 59, Lincoln’s Inn Fields.

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THE HOOPOE.



[[Hoopoe.]

THIS handsome bird, the Ἐποψ, (Epop) of the Ancient Greeks, under which name it figures as a principal character, in Aristophanes's play of "The Birds," *Upupa* of the Latins, *Gallo del Paradiso*, *Pubula*, *Bubola* and *Puppita* of the Italians, *Hupe*, *Huppe* and *Putput* of the French, *El Abubilla* of the Spa-

niards, *Wiedehopf* of the Germans, *Upupa Epops* of Linnæus, is generally an annual though a rare visitant to these islands. Latham indeed, mentions a nest which a pair began in Hampshire, and deserted on being disturbed; but such instances are not common. We most probably owe their visits to their periodical

migrations, when a few stragglers reach us. The bird is widely spread over Europe in the summer months, and is abundant in the South. Sweden is mentioned by some as its northern limit, where the country people are said to consider its appearance as ominous; and in Great Britain it was formerly looked upon by the same class as the harbinger of some calamity. Montagu relates that it is plentiful in the Russian and Tartarian deserts; and Sonnini saw it on the banks of the Nile: Africa indeed and Asia are supposed to be its winter quarters.

In a state of nature moist localities are the chosen haunts of the hoopoe. There it may be seen on the ground, busily searching with its long bill for its favourite insects, (chiefly coleopterous) which it often finds in cow-dung, and in the droppings of other animals; and sometimes it may be observed hanging from the branches of trees, examining the under side of the leaves for those which there lie hid.

The hole of a decayed tree is the locality generally preferred for the nest, which is made of dried grass lined with feathers, wool or other soft materials, and is generally very fetid from the remains of the insects, &c., with which the parent-birds have supplied their young. This offensive odour most probably gave rise to the story adopted by Aristotle*, that the nest of the hoopoe was formed of the most disgusting materials. When a hollow tree is not to be found, the places selected are sometimes the fissures of rocks, and the crevices of old buildings. The eggs are generally four or five in number, of a greyish-white spotted with deep grey or hair-brown.

Few birds are more entertaining in captivity: its beautiful plumage, droll gesticulations and familiar habits soon make it a favourite. When it perceives that it is observed it begins to tap with its bill against the ground, (which, as Bechstein observes, gives it the appearance of walking with a stick,) at the same time often shaking its wings and tail, and elevating its crest. This latter feat, which is performed very frequently and especially when the bird is surprised or angry, is effected by a muscle situated on the upper part of the head for the purpose. Its note of anger or fear is harsh and grating, something like the noise made by a small saw when employed in sawing, or the note of a jay, but nothing like so loud. It gives utterance to a soft note of complacency occasionally, and is not without other intonations. The grating note is not always indicative of anger or fear, for the bird generally exerts it when it flies up, and settles on its perch.

The following extract from a letter written by M. Von Schauroth, given by Bechstein in his interesting little book on stove-birds or cage-birds, a very good translation of which was published by Orr and Smith last year, cannot fail to interest our readers.

"With great care and attention," writes M. Von Schauroth, "I was able last summer to rear two young hoopoes, taken from a nest which was placed at the top of an oak-tree. These little birds followed me every where, and when they heard me at a distance, showed their joy by a particular chirping; jumped into the air, or, as soon as I was seated climbed on my clothes, particularly when giving them food from a pan of milk, the cream of which they swallowed greedily; they climbed higher and higher, till at last they perched on my shoulders, and sometimes on my head, caressing me very affectionately: notwithstanding this, I had only to speak a word to rid myself of their company; they would then immediately retire to the stove. Generally they would observe my eyes to discover what my temper might be, that they might act accordingly. I fed them like the nightingales, or with the universal paste, to which I sometimes added insects; they would never

touch earth-worms, but were very fond of beetles and may-bugs; these they first killed, and then beat them with their beak into a kind of oblong ball; when this was done, they threw it into the air, that they might catch it and swallow it lengthways; if it fell across the throat, they were obliged to begin again. Instead of bathing, they roll in the sand. I took them one day into a neighbouring field, that they might catch insects for themselves, and had then an opportunity of remarking their innate fear of birds of prey, and their instinct under it. As soon as they perceived a raven, or even a pigeon, they were on their bellies in the twinkling of an eye, their wings stretched out by the side of their head, so that the large quill feathers touched; they were thus surrounded by a sort of crown, formed by the feathers of the tail and wings, the head leaning on the back, with the beak pointing upwards; in this curious posture they might be taken for an old rag. As soon as the bird which frightened them was gone, they jumped up immediately, uttering cries of joy. They were very fond of lying in the sun; they showed their content by repeating in quivering tones, "vec, vec, vec;" when angry their notes are harsh, and the male, which is known by its colour being redder, cries "hoop, hoop." The female had the trick of dragging its food about the room, by this means it was covered with small feathers and other rubbish, which by degrees formed into an indigestible ball in its stomach, about the size of a nut, of which it died. The male lived through the winter; but not quitting the heated stove, its beak became so dry that the two parts separated, and remained more than an inch apart; thus it died miserably."

Buffon gives an account of one which was taken in a net when full grown, and became very much attached to its mistress, to whom it would fly for protection. It had two very different tones; one soft and inward, seeming, as Buffon says, to proceed from the very seat of sentiment,—this it addressed to its beloved mistress: the other sharp and more piercing, which expressed anger and fear. It was not confined; and though it had the full range of the house, and the windows were often open, it never showed the least desire to escape; its love of liberty not being so strong as its attachment. It is painful to add that this amiable bird died of hunger.

The hoopoe was not without its uses in the old *Materia Medica*. Thus we read that its heart was good against pains in the side; that the tongue suspended (round the neck we suppose) helped a bad memory; while a fumigation of the feathers was a vermifuge, and the skin cured the head-ache when placed on the ailing part.

Moreover, he who wished to dream astonishing dreams had only to anoint his temples with hoopoe's blood, and the wonderful vision was sure to follow.

Jonston, who enumerates these *formulae*, adds with great gravity, that he disbelieves the assertion that the right wing of the bird and a tooth, suspended at the head of a sleeper, will keep him in slumber till it be removed.

The plumage of the bird is too well known to need description here. The female is similar to the male, with the exception that her tints are less bright. Those who have tasted the flesh describe it as very unpalatable. A specimen was bought lately at Vienna, and brought to this country. The bird soon after it was purchased became tame, and was remarkably bold, not showing the least fear of a favourite dog, when allowed to come out of his cage. But the severe weather killed it, notwithstanding the great care taken to protect it from cold, and our drawing was copied, by permission; from a plate in Mr. Gould's splendid work, the 'Birds of Europe.'

* Hist. Anim. book 9, c. 15.

THE STEAM-ENGINE.

(From the New Edition of Dr. Lardner on the Steam-Engine,—a work of great research and authority.)

IN the year 1811, several of the proprietors of mines in Cornwall, suspecting that some of their engines might not be doing a duty adequate to their consumption of fuel, came to a determination to establish a uniform method of testing the performance of their engines. For this purpose a counter was attached to each engine to register the number of strokes of the piston. All the engines were put under the superintendence of Messrs. Thomas and John Lean, engineers; and the different proprietors of the mines, as well as their directing engineers, respectively pledged themselves to give every facility and assistance in their power for the attainment of so desirable an end. Messrs. Lean were directed to publish a monthly report of the performance of each engine, specifying the name of the mine, the size of the cylinder, the load upon the engine, the length of the stroke, the number of pump lifts, the depth of the lift, the diameter of the pumps, the time worked, the consumption of coals, the load on the pump, and, finally, the duty of the engine, or the number of pounds lifted one foot high by a bushel of coals. The publication of these monthly reports commenced in August, 1811, and have been regularly continued to the present time.

The favourable effect which these reports have produced upon the vigilance of the several engineers, and the emulation they have excited, both among engine-makers and those to whom the working of the machines are intrusted, are rendered conspicuous in the improvement which has gradually taken place in the performance of the engines, up to the present time. In a report published in December, 1826, the highest duty was that of an engine at Wheal Hope mine in Cornwall. By the consumption of one bushel of coals, this engine raised 46,838,246 pounds a foot high, or, in round numbers, forty-seven millions of pounds.

In a report published in the course of the present year (1835) it was announced that a steam-engine, erected at a copper-mine near St. Austle, in Cornwall, had raised by its average work 95 millions of pounds 1 foot high, with a bushel of coals. This enormous mechanical effect having given rise to some doubts as to the correctness of the experiments on which the report was founded, it was agreed that another trial should be made in the presence of a number of competent and disinterested witnesses. This trial accordingly took place a short time since, and was witnessed by a number of the most experienced mining engineers and agents: the result was, that for every bushel of coals consumed under the boiler the engine raised 125½ millions of pounds weight one foot high.

It may not be uninteresting to illustrate the amount of mechanical virtue, which is thus proved to reside in coals, in a more familiar manner.

Since a bushel of coal weighs 84 lbs. and can lift 56,027 tons a foot high, it follows that a pound of coal would raise 667 tons the same height; and that an ounce of coal would raise 42 tons one foot high, or it would raise 18 lbs. a mile high.

Since a force of 18 lbs. is capable of drawing 2 tons upon a railway, it follows that an ounce of coal possesses mechanical virtue sufficient to draw 2 tons a mile, or 1 ton 2 miles, upon a level railway.*

The circumference of the earth measures 25,000 miles. If it were begirt by an iron railway, a load of one ton would be drawn round it in six weeks by the amount of mechanical power which resides in the third part of a ton of coals.

* The actual consumption of coal upon railways is in practice about eight ounces per ton per mile. It is, therefore, worked with sixteen times less effect than in the engine above-mentioned.

The great pyramid of Egypt stands upon a base measuring 700 feet each way, and is 500 feet high; its weight being 12,760,000,000 lbs. To construct it, cost the labour of 100,000 men for 20 years. Its materials would be raised from the ground to their present position by the combustion of 479 tons of coals.

The weight of metal in the Menai bridge is 4,000,000 lbs., and its height above the level of the water is 120 feet: its mass might be lifted from the level of the water to its present position by the combustion of 4 bushels of coals.*

The enormous consumption of coals in the arts and manufactures, and in steam navigation, has of late years excited the fears of some persons as to the possibility of the exhaustion of our mines. These apprehensions, however, may be allayed by the assurance received from the highest mining and geological authorities, that, estimating the present demand from our coal-mines at 16 millions of tons annually, the coal fields of Northumberland and Durham alone are sufficient to supply it for 1700 years, and after the expiration of that time the great coal basin of South Wales would be sufficient to supply the same demand for 2000 years longer.

But, in speculations like these, the probable, if not certain, progress of improvement and discovery ought not to be overlooked; and we may safely pronounce that, long before a minute fraction of such a period of time shall have rolled over, other and more powerful mechanical agents will altogether supersede the use of coal. Philosophy already directs her finger at sources of inexhaustible power in the phenomena of electricity and magnetism. The alternate decomposition and re-composition of water, by magnetism and electricity, has too close an analogy to the alternate processes of vaporisation and condensation, not to occur at once to every mind: the development of the gases from solid matter by the operation of the chemical affinities, and their subsequent condensation into the liquid form, has already been assayed as a source of power. In a word, the general state of physical science at the present moment, the vigour, activity, and sagacity with which researches in it are prosecuted in every civilised country, the increasing consideration in which scientific men are held, and the personal honours and rewards which begin to be conferred upon them, all justify the expectation that we are on the eve of mechanical discoveries still greater than any which have yet appeared; and that the steam-engine itself, with the gigantic powers conferred upon it by the immortal Watt, will dwindle into insignificance in comparison with the hidden powers of nature still to be revealed; and that the day will come when that machine, which is now extending the blessings of civilisation to the most remote skirts of the globe, will cease to have existence except in the page of history.

STEAM NAVIGATION.

To form an approximate estimate of the limit of the present powers of steam navigation, it will be necessary to consider the mutual relation of the capacity or tonnage of the vessel; the magnitude, weight, and power of the machinery; the available stowage for fuel; and the average speed attainable in all weathers, as well as the general purposes to which the vessel is to be appropriated, whether for the transport of goods and merchandise, or merely of despatches and passengers. That portion of the capacity of the vessel which is appropriated to the moving power, consists of the space

* Some of these examples were given by Sir John Herschel, in his Preliminary Discourse on Natural Philosophy; but since that work was written an increased power has been obtained from coals, in the proportion of 7 to 12½.

occupied by the machinery and the space occupied by the fuel; the magnitude of the latter will necessarily depend upon the length of the voyage which the vessel must make without receiving a fresh supply of coals. If the voyage be short, this space may be proportionally limited, and a greater portion of room will be left for the machinery. If, on the contrary, the voyage be longer, a greater stock of coals will be necessary, and a less space will remain for the machinery. More powerful vessels, therefore, in proportion to their tonnage, may be used for short than for long voyages.

Taking an average of fifty-one voyages made by the Admiralty steamers, from Falmouth to Corfu and back during four years ending June, 1834, it was found that the average rate of steaming, exclusive of stoppages, was $7\frac{1}{4}$ miles per hour, taken in a direct line between the places, and without allowing for the necessary deviations in the course of the vessel. The vessels which performed this voyage varied from 350 to 700 tons burden by measurement, and were provided with engines varying from 100 horse to 200 horse-power, with stowage for coals varying from 80 to 240 tons. The proportion of the power to the tonnage varied from 1 horse to 3 tons to 1 horse to 4 tons; thus, the Messenger had a power of 200 horses, and measured 730 tons; the Flamer had a power of 120 horses, and measured 500 tons; the Columbia had 120 horses, and measured 360 tons.

In general, it may be assumed that for the shortest class of trips, such as those of the Margate steamers, and the packets between Liverpool or Holyhead and Dublin, the proportion of the power to the tonnage should be that of 1 horse-power to every 2 tons by measure; while for the longest voyages the proportion would be reduced to 1 horse to 4 tons, voyages of intermediate lengths having every variety of intermediate proportion.

Steamers thus proportioned in their power and tonnage may then, on an average of weathers, be expected to make $7\frac{1}{4}$ miles an hour while steaming, which is equivalent to 174 miles per day of twenty-four hours. But, in very long voyages, it rarely happens that a steamer can work constantly without interruption. Besides stress of weather, in which she must sometimes lie-to, she is liable to occasional derangements of her machinery, and more especially of her paddles. In almost every long voyage hitherto attempted, some time has been lost in occasional repairs of this nature while at sea. We shall perhaps, therefore, for long voyages, arrive at a more correct estimate of the daily run of a steamer by taking it at 160 miles.

By a series of carefully-conducted experiments on the consumption of coals, under marine boilers and common land boilers, which have been lately made at the works of Mr. Watt, near Birmingham, it has been proved that the consumption of fuel under marine boilers is less than under land boilers, in the proportion of 2 to 3 very nearly. On the other hand, I have ascertained from general observation throughout the manufacturing districts in the north of England, that the average consumption of coals under land boilers of all powers above the very smallest class is at the rate of 15 lbs. of coals per horse-power per hour. From this result, the accuracy of which may be fully relied upon, combined with the result of the experiments just mentioned at Soho, we may conclude that the average consumption of marine boilers will be at the rate of 10 lbs. of coal per horse-power per hour. Mr. Field, of the firm of Maudslay and Field, in his evidence before a Select Committee of the House of Commons on Steam Navigation to India, has stated from his observation, and from experiments made at different periods, that the consumption is only 8 lbs. per horse-power per hour. In the evidence of Mr. William Morgan, how-

ever, before the same committee, the actual consumption of fuel on board the Mediterranean packets is estimated at 16 cwt. per hour for engines of 200 horse-power, and $8\frac{1}{4}$ cwt. for engines of 100 horse-power. From my own observation, which has been rather extensive both with respect to land and marine boilers, I feel assured that 10 lbs. per hour more nearly represents the practical consumption than the lower estimate of Mr. Field. We may then assume the daily consumption of coal by marine boilers, allowing them to work upon an average for 22 hours, the remainder of the time being left for casual stoppages, at 220 lbs. of coal per horse power, or very nearly 1 ton for every ten horses' power. In short voyages, where there will be no stoppage, the daily consumption will a little exceed this; but the distance traversed will be proportionally greater.

When the proportion of the power to the tonnage remains unaltered, the speed of the vessel does not materially change. We may therefore assume that 10 lbs. of coal per horse power will carry a sea-going steamer adapted for long voyages $7\frac{1}{4}$ miles direct distance; and therefore to carry her 100 miles will require 138 lbs., or the $\frac{1}{16}$ th part of a ton nearly. Now, the Mediterranean steamers are capable of taking a quantity of fuel at the rate of $1\frac{1}{4}$ tons per horse power; but the proportion of their power to their tonnage is greater than that which would probably be adapted for longer runs. We shall, therefore, perhaps be warranted in assuming that it is practicable to construct a steamer capable of taking $1\frac{1}{2}$ tons of fuel per horse-power. At the rate of consumption just mentioned, this would be sufficient to carry her 2400 miles in average weather; but as an allowance of fuel must always be made for emergencies, we cannot suppose it possible for her to encounter this extreme run. Allowing, then, spare fuel to the extent of a quarter of a ton per horse-power, we should have as an extreme limit of a steamer's practicable voyage, without receiving a relay of coals, a run of about 2000 miles.

War.—Another powerful spring of war is the admiration of the brilliant qualities displayed in war. These qualities, more than all things, have prevented an impression of the crimes and miseries of this savage custom. Many delight in war, not for its carnage and woes, but for its valour and apparent magnanimity,—for the self-command of the hero,—the fortitude which despises suffering,—the resolution which courts danger,—the superiority of the mind to the body,—to sensation,—to fear. Let us be just to human nature even in its errors and excesses. Men seldom delight in war, considered merely as a source of misery. When they hear of battles, the picture which rises to their view is not what it should be, a picture of extreme wretchedness, of the wounded, the mangled, the slain. These horrors are hidden under the splendour of those mighty energies, which break forth amidst the perils of conflict, and which human nature contemplates with an intense and heart-thrilling delight. Attention hurries from the heaps of the slaughtered to the victorious chief, whose single mind pervades and animates a host, and directs with stern composure the storm of battle; and the ruin which he spreads is forgotten in admiration of his power. This admiration has, in all ages, been expressed by the most unequivocal signs. Why that garland woven? that arch erected? that festive board spread? These are tributes to the warrior. Whilst the peaceful sovereign, who scatters blessings with the silence and constancy of Providence, is received with a faint applause, men assemble in crowds to hail the conqueror, perhaps a monster in human form, whose private life is blackened with lust and crime, and whose greatness is built on perfidy and usurpation. Thus war is the surest and speediest road to renown; and war will never cease while the field of battle is the field of glory, and the most luxuriant laurels grow from a root nourished with blood.—*From Discourses, Reviews, and Miscellanies, by the Rev. W. E. Channing.*

ALNWICK CASTLE.



[Alnwick Castle, Northumberland.]

ALNWICK CASTLE, one of the seats of the Duke of Northumberland, is interesting from its antiquity, the stirring events connected with its history, and its present state of complete restoration: it now exhibits one of the best specimens of the old baronial structures of Great Britain. The castle is placed on an eminence, which rises from the south side of the river Alne, opposite to the town of Alnwick. It is stated by Grose,

that immediately before the Norman conquest, the castle and barony of Alnwick belonged to a baron of the name of Gilbert Tyson, who was slain with Harold at the fatal battle which gave William the crown of England. The possession passed into the hands of the Norman lords de Vescy, where it remained until the reign of Edward I., when, in 1297, Lord William de Vescy dying without legitimate issue, he, by the king's

licence, bequeathed the castle and barony to the Bishop of Durham, who, twelve years afterwards, sold them to the Lord Henry de Percy, from whom they have come down, in regular succession, to the present noble occupants.

At whatever time a castle was first erected here, it was a place of great strength from a very early period. In the reign of William Rufus, Malcolm III. of Scotland, surnamed Cean-mohr, or Great-head, laid siege to Alnwick Castle, and both he and his son fell in a conflict with a party of Anglo-Norman troops, who came to the assistance of the besieged. A story has been long repeated in the common histories connected with this siege, and the death of Malcolm. It is stated that the garrison of the castle, despairing of succour, were on the point of surrendering to the Scotch, when a soldier rode forth completely armed, and, presenting the keys of the castle to the incautious king on the point of a spear, he suddenly pierced his eye, and killed him, and, by the fleetness of his horse, escaped across the river, which was then swollen with rain. To this the fable adds, that the author of the successful stratagem obtained the name of Percy from "pierce eye," and that he became the founder of the house of Northumberland. The latter part of the story has been long ago shown to be pure invention, for William de Percy, the ancestor of the family, came over with the Conqueror, and had founded Whitby Abbey, in Yorkshire, before the death of Malcolm, as appears from the charter of foundation which bears his name. The surname Percy was derived from the family domain in Normandy; and, as has been already mentioned, the Percys did not become possessed of Alnwick till about the beginning of the fourteenth century. The former part of the story,—that of Malcolm being actually slain by a soldier from the garrison, who pretended to present the keys of the castle,—though it rests on somewhat better evidence than the latter, is also, in all probability, fabulous. Sir Walter Scott states that Roger de Mowbray, a Norman baron, at the head of a considerable force, surprised the Scotch king before the walls of Alnwick, on the 13th of November 1098, and that an action ensued, in which Malcolm Cean-mohr and his son were both slain.

Alnwick Castle proved disastrous to another Scotch king, William, surnamed the Lion, from his having been the first to adopt the lion into the royal arms of Scotland. The celebrated Richard Cœur de Lion, while young, having rebelled against his father, Henry II., William needlessly interfered in the fray, and engaged to help the rebel son against his sovereign and parent. In pursuance of his engagement, he entered Northumberland with a tumultuary army, and laid siege to Alnwick. A party of about 400 English horse had sallied from Newcastle one morning in quest of adventure; they were enveloped in a mist, and lost their way; but on the mist suddenly clearing up, they found themselves in the neighbourhood of Alnwick, and not far from William, who, with about 60 horse, was scouring the country, the rest of his army being scattered in search of plunder. William at first mistook the English horse for a part of his own troops; but being informed of his mistake, he gallantly exclaimed, "Now shall we see who are good knights!" and charged. But he was unhorsed, taken prisoner, with a number of his attendants, and carried to Henry II., to whom he was presented with his legs tied beneath his horse's belly. Henry was doubtless exasperated at William's interference in the quarrel between himself and his son; nor was the Scottish monarch released from captivity until, by a special treaty, he bound himself as the liegeman of Henry, and engaged to do homage for Scotland. This occurred in the year 1174. After Henry's death, Richard, previous to his departure

for the Holy Land, annulled the degrading treaty on being paid 10,000 marks.

It would greatly exceed our limits to give a history of Alnwick Castle, for such a history would in fact embrace a history of the "debateable land," and all the feuds and forays of the borders. The names of Percy and Douglas are amongst the most renowned in the ballad lore of our country. The bloody contests of rival chiefs, or the fatal inroads of rival monarchs, frequently turned the entire border country into a vast desert of desolation and ruin. When plunder could not be obtained on a foray, the ravagers endeavoured to bring home at least a booty of "men;" for, as in all such cases, the common people were the sufferers. The prisoners thus taken were sold as slaves; and there are occasional periods in the annals of England and Scotland, when, from the immense number of prisoners brought home, according to the success of either party, slaves became, in modern phrase, a drug in the market.

Alnwick Castle was kept rather as a military fortress than as a domestic residence by the Percys. On first coming into their hands, it was substantially repaired. About the year 1567, a minute survey was made of the place by the surveyor of the Earl of Northumberland, a copy of which is given in Grose. From this document it would appear that a considerable part of the building was in a defective state, from the lapse of time and injuries. It describes the place as "The Castell of Alnewike, a verye ancyent, large, beutifull and portlie castell, scytewate on ye southe side of ye ryver of Alne, upon a lytle mote." There is a curious passage in it, which shows that glass was an expensive rarity at that time:—"And because throwe extreme winds the glasse of the windowes of this and other my lord's castles and houses here in the countrie dooth decay and waste, yt vere good the whole leights of everie windowe at the departure of his lordshippe from lying at any of his said castels and houses, and dowering [*i. e.* during] the tyme of his lordship's absence, or others lying in them, were taken downe, and lade up in safty. And at sooche tyme as ather his lordship or anie other shole lie at anie of the said places, the same might then be set up of new with small charges to his lordship, wher [*i. e.*, whereas] now the decay thereof shall be verie costlie, and chargeable to be repayred."

The 'Household Book' of the Earl of Northumberland, a MS. which was drawn up in the sixteenth century, and which was printed in the year 1780 by the late duke, contains a number of very interesting particulars respecting the style of living at that period in this rich and princely family. The mention of this circumstance has no immediate connexion with Alnwick Castle, further than that Alnwick belongs to the Duke of Northumberland: for the regulations laid down in the book are for the direction of the household at Wressil and Leckinfield castles. The same style of living would however be kept up when the earl visited Alnwick. This book, as the editor remarks, exhibits a curious picture of ancient manners. The Earl of Northumberland emulated a royal style; all the head officers of his household were gentlemen by birth; and among other instances of magnificence it may be stated that not fewer than eleven priests were kept in the household, at the head of whom presided a doctor or bachelor of divinity, as dean of the chapel. The earl and his family ordinarily used wooden trenchers at their meals, but on great occasions pewter vessels were hired to grace the board. In removing, all the beds, hangings, and furniture, were carried from one castle to another. On such an occasion the number of carts employed in a family of this size must have formed a caravan nearly as large as those which traverse the deserts of the East. In fact, the mingling of rude mag-

nificence and splendour with what, now-a-days, would be termed misery, poverty, and distress, meets us wherever we obtain a view of the domestic manners of the nobility of the feudal times.

About eight years ago, the then Duke of Northumberland re-edified Alnwick Castle at an expense, as stated, of nearly 200,000*l.* So solicitous was he to have the castle rebuilt after the precise model of the old one, that he preserved a number of stone warriors which formerly graced the battlements, and replaced them in their old positions; and such as were too feeble, from age and injuries, to occupy their stations he dismissed, but got new statues cut to supply their place, that nothing might be wanting. The castle now is therefore quite a model of what Alnwick was in the days of the border chivalry. The entrance, like that of Warwick Castle, is through a large gate between two high round towers; this opens into a spacious court, surrounded on all sides by walls with high battlements. The part of the castle which contains the family residence, stands on an artificial elevation in the centre of the inner court. The apartments are fitted up in a very splendid manner. The library, which is a room of 64 feet in length, has a very good selection of books. The chapel is elaborately decorated. The ceiling is an imitation of the ceiling of the chapel of King's College, Cambridge; the paintings on the walls are borrowed from those of the cathedral of Milan; and the genealogical table of the house of Northumberland is interwoven with them. The chapel is 50 feet in length, 22 in height, and 21 in breadth. The apartments for the servants are in the towers. The keep or prison is partly above and partly under ground.

Alnwick castle is situated in the neighbourhood of a number of interesting objects. The town of Alnwick itself—the ruins of two abbeys—Warkworth castle and hermitage—one or two monuments—Morpeth castle, &c. are all within a moderate distance. The grounds round Alnwick castle are in very fine order.

DESCRIPTION OF THE PROCESS OF MALTING.

(From the Fifteenth Report of the Commissioners of Excise Inquiry.)

BARLEY is the grain generally used, but oats and other grain, and pulse, viz., beans and peas, are sometimes used for the purpose; and the process commences with wetting or steeping the same in an oblong or square vessel called a cistern. Sometimes the grain is first put into the cistern and then covered with water, at other times the water is first put in and the grain added afterwards.

Very soon after the grain has been covered with water it begins to swell and increase in bulk, and continues to do so pretty regularly until it reaches its maximum. The amount of the swell depends not only upon the length of time the grain remains in the steep covered with water (which by law can in no case be less than forty hours), but also upon its quality, and state of dryness before put in steep, and must of course be expected to vary; but the law presumes that the swell will amount to seventeen and a-half bushels for every eighty-two and a-half bushels before steeped.

The grain, after being steeped, and the water drawn off, is thrown out of the cistern into a square or oblong utensil called a couch-frame, in which it is required by law to remain for the space of twenty-six hours at the least. Immediately after the expiration of twenty six or thirty hours, as the case may be, the grain in operation is said to be on the floor; and during the time it remains on the floor it undergoes a variety of changes.

1st. The grain at a certain period (which varies according to circumstances) becomes moist, and emits a

rather agreeable smell, and soon after this period the roots begin to make their appearance.

2nd. The acrospire or future stem begins to swell, and gradually advances under the husk from the same end where the roots are observed to spring, till it nearly reaches the other extremity of the grain.

3rd. The kernel, as the acrospire advances through it, becomes friable and sweet-tasted, and the whole art of malting depends upon the proper regulation of these changes. In a day or two after the grain has been thrown out of the cistern the roots begin to appear at the end of each kernel in the shape of a small white protuberance, which soon divides itself into distinct fibres or rootlets. The grain about this time appears moist on the outside, which is called *sweating*, and which usually goes off in a day or two.

In about a day generally after the spreading of the roots, the rudiments of the future stem may, by splitting the grain, be seen to lengthen. It rises from the same extremity with the root, and, advancing within the husk, would at last issue from the opposite end of the grain and assume the form of a green blade of grass; but the process of malting is brought to a conclusion some time before the stem has made such progress as to burst the husk.

As the germination proceeds, the grain is gradually spread thinner on the floor; and when the moisture has been in some degree evaporated, and the germination has thereby been checked, it is again gradually laid thinner to wither. Maltsters differ much in their manner of working, which is affected also by the state of the weather.

The grain having thus germinated to the extent required is put upon the kiln, and heat applied by means of a fire, which is regulated according to circumstances; and when the malt has attained the requisite state of dryness it is thrown off the kiln, the process being then finished.

THE FORGING OF THE ANCHOR.

By S. FERGUSON.

(Copied by Permission of the Author from Blackwood's Magazine.)

"COME, see the Dolphin's Anchor forg'd; 'tis at a white heat now: The bellows ceased, the flames decreased; though on the forge's brow,

The little flames still fitfully play through the sable mound; And fitfully you still may see the grim smiths ranking round, All clad in leathern panoply, their broad hands only bare; Some rest upon their sledges here, some work the windlass there.

The windlass strains the tackle chains, the black mound heaves below;

And red and deep a hundred veins burst out at every throe:

It rises, roars, rends all outright—O, Vulcan, what a glow!

'Tis blinding white, 'tis blasting bright; the high sun shines not so!

The high sun sees not, on the earth, such fiery fearful show;

The roof-ribs swarth, the candent hearth, the ruddy lurid row

Of smiths, that stand, an ardent band, like men before the foe;

As, quivering through his fleece of flame, the sailing monster, slow

Sinks on the anvil—all about the faces fiery grow—

'Hurrah!' they shout, 'leap out—leap out;' bang, bang, the sledges go:

Hurrah! the jetted lightnings are hissing high and low;

A hailing fount of fire is struck at every squashing blow;

The leathern mail rebounds the hail; the rattling cinders strow

The ground around; at every bound the sweltering fountains flow;

And thick and loud the swinking crowd at every stroke pant

'ho!

Leap out, leap out, my masters; leap out and lay on load!

Let's forge a goodly anchor; a Bower, thick and broad:

For a heart of oak is hanging on every blow. I bode;

And I see the good ship riding all in a perilous road

The low reef roaring on her lee; the roll of ocean poured

From stem to stern, sea after sea; the mainmast by the board;

The bulwarks down; the rudder gone; the boats stove at the

chains;

But courage still, brave mariners—the Bower yet remains,

And not an inch to flinch he deigns save when ye pitch sky high,

Then moves his head, as though he said, 'Fear nothing—here

am I!

Swing in your strokes in order; let foot and hand keep time,
Your blows make music sweeter far than any steeple's chime;
But while ye swing your sledges, sing; and let the burthen be,
The anchor is the anvil king, and royal craftsmen we!
Strike in, strike in—the sparks begin to dull their rustling red;
Our hammers ring with sharper din, our work will soon be sped:
Our anchor soon must change his bed of fiery rich array
For a hammock at the roaring bows, or an oozy couch of clay;
Our anchor soon must change the lay of merry craftsmen here,
For the yeo-heave-o', and the heave-away, and the sigling sea-
man's cheer;

When, weighing slow, at eve they go, far, far from love and home;
And sobbing sweethearts, in a row, wail o'er the ocean foam.
In livid and obdurate gloom he darkens down at last;
A shapely one he is, and strong, as e'er from cat was cast.—
O trusted and trustworthy guard, if thou hadst life like me,
What pleasures would thy toils reward beneath the deep green sea!
O deep sea-diver, who might then behold such sights as thou?
The hoary monster's palaces! methinks what joy 'twere now
To go plumb plunging down amid the assembly of the whales,
And feel the churn'd sea round me boil beneath their scourging
tails!

Then deep in tangle-woods to fight the fierce sea unicorn,
And send him foiled and bellowing back, for all his ivory horn;
To leave the subtle sworder-fish of bony blade forlorn;
And for the ghastly-grinning shark to laugh his jaws to scorn;
To leap down on the kraken's back, where 'mid Norwegian isles
He lies, a lubber anchorage for sudden shallowed miles;
Till snorting, like an under-sea volcano, off he rolls;
Meanwhile to swing, a-buffeting the far-astonished shoals
Of his back-browsing ocean calves; or, haply in a cove,
Shell-strown, and consecrate of old to some Undine's love,
To find the long-hair'd mermaidens; or, hard by icy lands,
To wrestle with the sea-serpent, upon cerulean sands.

O broad-armed fisher of the deep, whose sports can equal thine?
The Dolphin weighs a thousand tons that tug's thy cable line;
And night by night 'tis thy delight, thy glory day by day,
Through sable sea and breaker white, the giant game to play;
But, shamer of our little sports! forgive the name I gave,
A fisher's joy is to destroy—thine office is to save.
O lodger in the sea-king's halls, couldst thou but understand
Whose be the white bones by thy side, or who that dripping band,
Slow swaying in the heaving wave that round about thee bend,
With sounds like breakers in a dream blessing their ancient friend:
Oh, couldst thou know what heroes glide with larger steps round
thee,
Thine iron side would swell with pride; thou'dst leap within the
sea:

Give honour to their memories who left the pleasant strand,
To shed their blood so freely for the love of father-land,
Who left their chance of quiet age and grassy churchyard grave,
So freely, for a restless bed amid the tossing wave:
Oh, though our anchor may not be all I have fondly sung,
Honour him for their memory, whose bones he goes among!"

WHALE FISHERY ON THE COAST OF IRELAND.

It appears from evidence given during the last Session of Parliament before a Committee on Public Works in Ireland, that the whale fishery might be carried on with advantage on the north-west coast of Ireland. The following extract of a letter from Lieutenant Boroughs, Commander of the Coast Guard, contains many curious details:—

It is very extraordinary, and still very true, that this coast (one of the best fishing coasts in Europe, abounding from the most productive whales, both spermaceti and Greenland, to the common herring), possesses the worst and most ignorant race of fishermen, and (with a few exceptions) very indifferent boatmen. But the cause of these remarks may be easily accounted for; their poverty, which prevents them from procuring proper stout vessels for so dangerous a coast, and almost total absence of all patronage and support to follow up with energy and spirit the unbounded sources of wealth which nature has thrown within their grasp. It may appear still more extraordinary to those connected so extensively in the Greenland and South Sea whale fishery, that they should so long have remained in ignorance that those fish abound on the coast which I have described. In order to give proof to so bold an assertion, I shall state some circumstances which came

under my immediate observation in my own vessels, and at a subsequent period in command of a revenue cutter. On a visit, in company with the Rev. Mr. Mahon, to the sun-fishery at Bofin Island, we strayed on a blustry day to observe the coast and breakers; at a short distance from the shore we saw several large fish, which I supposed to be grampuses or finners, that had taken shelter under the lee of the island: still looking closely at them, they advanced towards the rocks immediately under the cliffs, where we had a perfect view of them at a distance of 500 yards with a spy-glass, their double-tufted heads quite conspicuous, and no intervening back-fins; I decided at once on their species. In the month of July, after the sun-fishery, a large spermaceti whale was drifted on shore, dead, at the bay of Bunowen, in Connemara, about two leagues from Clifden or Ardbear Harbour; in consequence of the ignorance of the peasantry and boatmen, and their continual squabbling and fighting, three-fourths of the oil was lost; the surface of the bay was dyed with a rainbow tinge from the floating particles of oil. Shortly after an immense fish was towed into the island of Turk by three of the island fishing-boats; the monster was observed floating about a mile from the island, and had been but recently killed, but how could not be ascertained; this fish completely filled up the small and only inlet in the island, and measured in length thirty-three yards; it was claimed by the proprietor, I believe the Archbishop of Tuam, who, I had been informed, gave it up to the islanders. A small village near the place where they had towed it to shortly became deserted, the inhabitants never calculating on the fœtid air caused by their imprudence. The islanders were two months employed in cutting up and launching over the cliffs the bones and remains of their prize. About the beginning of August, in beating down Blacksod bay with light airs, and near the islands of Inniskeas, two large whales came nearly alongside the cutter; the day very fine, and making but little way, I ordered the gig and jolly-boat out and pursued them; and had the men been sufficiently acquainted with the art, I should have succeeded in killing them; they allowed me to go alongside them, and I was only prevented from striking them by the bowman, who intercepted me at the moment by panic, being fearful of the event of a lash of the tail. What the result might have been I know not, but nothing could have been easier accomplished than striking them, and only in fifteen fathoms water. I had been after these whales three hours, and they never went above about 300 yards from our boats, and at that distance turned their huge heads towards the boats, and got wary. I gave up following towards evening; had I struck them at the commencement of our chase, when they were perfectly tame, I might have succeeded, even with the sun-fish spear and line, owing to the small depth of water.

Labourers in Denmark.—In Denmark, notwithstanding Sunday is nearly as much a work-day as any other, the wages of labourers do not usually amount to more than 15*l.* a-year. Women earn about 4*d.* a day. The united earnings of a family, consisting of a labourer and his wife with three or four children, will not enable them to purchase anything better as food than rye-bread, bad milk-cheese and butter and poor coffee; to which must be added tobacco and snuff, and cheap bad spirits, which they consume in large quantities. The weekly earnings of a spinner are 6*s.* or 7*s.*; and those of a weaver are from 7*s.* to 12*s.* In the most favourable situations, the diet is not so bad as we have mentioned.—From an article on the Condition of Working Men in Europe, in the 'Working Man's Year Book for 1836.'

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BIRMINGHAM.



[View of Ancient Birmingham.]

THE evidences of the antiquity of Birmingham, as the chief seat of art and manufacture in Britain, are independent of the testimony of topographers. The dingy regions of mineral enterprise offered but few attractions for those who travelled to fill their portfolios with sketches of ecclesiastical edifices, castellated remains, camps, moats, and tumuli; nor was the din of files and hammers an inciting matter for antiquarian speculation or historical research.

Leland passed over the busy scene about the year 1540; but our curiosity is as little excited as gratified by his notice of it, which we insert below on the sole ground of its brevity and quaintness. Camden followed Leland about forty years afterwards, and admits "Bermicham" to be "full of inhabitants, and resounding with hammers and anvils; for the most of them are smiths. The lower part thereof standeth very waterish: the upper riseth with faire buildings." Speed has published an itinerary of Warwickshire without once mentioning Birmingham; and we are left, as far as he is concerned, to infer the nature and extent of the operations carried on in the corner of the county "north of the Avon," by his remark, that the woods are becoming "much thinner by the making of iron, and the soil more churlish to yeeld to the plough." Dugdale is as little inclined as his predecessors to award due honour to the men of Birmingham for their industry and skill, content with expatiating, after the fashion of his times, on the family history of the lords "Birmingham."

The first author who ever attempted to describe Birmingham with any pretensions to the requisite qualifications of the antiquarian and admirer of the triumphs of industry and art, was William Hutton, whose work has recently been enlarged, and republished by Guest, of Birmingham.

VOL. V.

Speculative opinions on the origin of a town's name, highly flattering to every one's feelings of native partiality, and therefore more or less indulged in at the commencement of all local histories, will give little lustre to the honours of Birmingham. Antiquarians differ greatly on this question. The late Mr. Hamper, an inhabitant of Birmingham, and a man of great antiquarian research, asserts that the name of this town has been spelt by different writers and at different times in no less than 140 different ways. The two extremes, however, of the modes of spelling and pronouncing it appear to have been these—Bromwyham and Bermyngeham: which is the right it is difficult to determine, but perhaps, in point of antiquity, the former has the preference, though the latter has prevailed at very distant periods. It has always been pronounced by the mass of the population Brummejum or Brummagem; and in imitation of the supposed more ancient spelling, the late Dr. Parr and more than one eminent literary man of the present day pronounce it as if written Bromicham. Hutton derives the name from *Brom*, the Saxon spelling for the shrub broom, *wich*, or *wic*, a village, a fortress, and various other things, and *ham*, the common Saxon termination expressive of residence. Birmingham, therefore, according to Hutton, signifies a residence on Broom-hill or in Broom village. That the consonant ought to precede the vowel in the first syllable of the word in question may be inferred from the fact of the antiquity of this mode, its common use, as well as the circumstance of there being in the neighbourhood of the town two Bromwicks and one Bromsgrove. Some writers derive Birmingham from the Roman, others from the Celtic or British, and a few, we believe, contend that it is composed of both languages, including Saxon and Danish. To us all their speculations appear to be vague and frivolous.

G

The antiquity of the Cornish tin-mines and the commercial intercourse which the workers of those mines held with the Phenicians, who brought hither the productions of the East to be exchanged for the mineral treasures of the aboriginal islanders, are considered by some as matters of history. But for the raising the tin ore and the operations of smelting, hammering, cutting, shaping, and conveyance, machinery of some kind must have been used, and a harder substance than tin must have been used as tools; and thus we are thrown back into speculations on the pre-existence, or at least co-existence of iron mines, and the manufacture of implements of iron.

When Julius Cæsar invaded this island, the Britons resisted him with that formidable engine the war-chariot, having a sharp blade, somewhat resembling that of a scythe, projecting horizontally from each wheel; and this, to say nothing of their spears, swords, shields, and implements of husbandry, is another and direct evidence of British iron manufacture at a period of which no historical records of it have been preserved. Camden quotes a Roman orator of the fourth century who, in an address to Constantius, the father of Constantine, deploras the loss the Roman empire would sustain by the abandonment of Britain as "a land full of mines and veins of metall." From such evidence of the antiquity of iron manufacture in Britain we are naturally led into inquiries respecting the sources of the material itself: and no other district offering such ancient and extensive traces of iron-mining operations; such extensive forests, converted into charcoal; such mounds of cinders to testify the ancient labours of smithery as the district surrounding Birmingham, to that district must be assigned the earliest honours of metallic handicraft in Britain, a distinction of which modern discoveries in machinery, and the greatest perfection in every branch of the art, confirm the justice. "Upon the borders of the parish," says Hutton, "stands Aston Furnace, appropriated for melting iron-stone and reducing it into pigs;—this has the appearance of great antiquity. From the melted ore in this subterranean region of infernal aspect is produced a calx or cinder, of which there is an enormous mountain. A few years ago a jeweller cut and polished some cinders from this place, and set them in rings, brooches, and other articles of jewellery, as fragments of Pompey's Pillar: much money was made before the fraud was discovered. From an attentive survey the observer would suppose so prodigious a heap could not accumulate in one hundred generations; however, it shows no perceptible addition in the age of man. This place is now changed into a paper manufactory.

"There is also a common of vast extent, called Wednesbury Old Field, seven miles from Birmingham, in which are the vestiges of many hundreds of coal-pits, long in disuse, which the curious antiquarian would deem as long in sinking as the mountain of cinders in rising."

Antiquarians date the period of the existence of Birmingham, as a market-town, prior to the Roman invasion. The charters for the market and fairs have been renewed at different periods, by both Saxon and Danish kings, which show an increase in population and importance; but the market-day has never been changed: it has always been Thursday.

Birmingham is situated in nearly the centre of the Saxon kingdom of Mercia, the northern boundary of which was the Humber, the southern the Thames, the western the Severn, and the eastern Norfolk and the German Ocean. The founder of this kingdom and its first king was Cridda, a Saxon military adventurer, who gave Birmingham, in 585, to one of his lieutenants, of the name of Ulwine, a prænomen, all the corruptions of which are included in the now common surname of Allen.

The Allens possessed Birmingham until William the Norman introduced the feudal law into this country, and usurped absolute dominion over all private as well as public lands and other property. In his arbitrary division of the land into baronies, he gave Birmingham with all its rights, dependencies, and immunities to one of his Norman followers, of the name of William Fitz Ausculph. The Allens of Birmingham, in common with the other English gentry of that period, were forced to bend under the yoke of Norman usurpation, and in lieu of their hereditary claims, were compelled to the alternative of either submitting to a degrading vassalage, or to hold their ancient patrimony by military tenure. They preferred the latter, retaining also their residence on the Birmingham estate, and became the knights or servers to their superiors, the Barons Fitz Ausculph, who successively held their court at Dudley Castle. The manor was held in regular succession by this family till the reign of Henry VIII., when Edward de Birmingham, having peaceably enjoyed the family honours and estates till 1537, was suddenly deprived of both, through the machinations of John Dudley Lord L'Isle, (the then occupant of Dudley Castle and its princely domains) who afterwards became Duke of Northumberland in the time of Edward VI. The melancholy story is related in 'Dugdale's Antiquities of Warwickshire.' Northumberland coveted the manor of Birmingham, and sounded Edward de Birmingham respecting the disposal of it; but the latter being in no need of money, and having a natural objection to alienate a property which had been in the possession of his family for many centuries, the Duke's overtures were rejected. Upon this, he resolved on the execution of a project which has seldom been exceeded in the annals of infamy; which was to hire some villains to perform the ceremony of a highway robbery on one of their own fraternity on a public highway, at a moment when Edward de Birmingham should be passing, so that it might be sworn he was present as a confederate. By this clumsy contrivance, and on such evidence, was the lineal descendant of a thousand years of honourable ancestry convicted of a highway robbery!

Hints were then of course thrown out that an ignominious death might be averted by making over the manor of Birmingham to the Duke, who would use his influence with the king to save the culprit's life. With this impudent proposal the hapless Edward felt it necessary to comply, with a reservation of 40*l.* per annum for the future support of himself and his wife.

Thus ended the importance of the ancient and honourable family of De Birmingham: and in a few years afterwards [1st Mary, 1553] Northumberland himself paid the forfeit of his own head for treason.

But this execution, like many others of those times, was the effect rather of accident, caprice, or some wild and barbarous notion of personal vengeance, than of any discriminating and active principle of justice in the breast of the sovereign. On the attainder and execution of Northumberland, the estate fell to the crown; and Queen Mary, instead of returning the property to the wronged and despoiled family of Birmingham, conveyed it to a Warwickshire family of the name of Marrow, in whose possession it continued till the beginning of the last century, when, the possessors being all females, they sold it to Doctor Sherlock, Bishop of London, who in 1746 resold it to Thomas Archer, of Umberslade, in Warwickshire, from whom it descended to Andrew Lord Archer, who died in 1778, leaving three daughters, co-heiresses, one of whom was married to the Earl of Plymouth, another to Christopher Musgrave, Esq., of the county of Sussex, by whom the manor is still held. The most important of the manorial rights, the market tolls, were purchased, a few years ago, by the Commissioners of

the Birmingham Street Acts, for the benefit of the town, for the sum of 12,500*l.*, and are now supposed to be worth 45,000*l.*

The locality of the manorial residence of the original Lords de Birmingham, as moated round, in the Saxon times, and inhabited by them and their successors, was at the southern extremity of the town, below the church of St. Martin. Leland visited Birmingham in 1538, but his description does not include the manor-house or castle, as Hutton calls it, which was a moated residence standing near the old church, the site of which is now used as a beast market.

"I came through a pretty street," he says, "as ever I entred into Bermigham towne. This street, as I remember, is called *Dirtey* [Deritend]. In it dwell smithes and cutlers, and there is a brooke that divideth this streete from Bermigham, and it is an hamlet or member belonging to the parish therebye. (Aston).

"There is at the end of *Dirtey* a propper chappell, and mansion-house of tymber hard on the ripe (*ripa*, a bank,) as the brook runneth downe; and as I went through the ford by the bridge, the water ran downe on the righte hand a few miles lower goeth into *Tame*, *ripa dextra*.

"This brooke, above *Dirtey*, breaketh into two armes, that a little beneath the bridge close again. This brooke riseth, as some say, four or five miles above Bermigham, towards Black Hilles.

"The beauty of Bermigham, a good market towne in the extreame parts of Warwickshire, is one street going up alonge, almost from the left ripe of the brook up a meane hill, by the length of a quarter of a mile. I saw but one paroch church in the towne. There be many smithes in the towne, that used to make knives and all mannour of cuttinge tooles, and many loriners, that make bittes, and a great many naylor, so that a great part of the town is maintained by smithes who have their iron and sea-coal out of Staffordshire."

On referring to the view we have prefixed of Birmingham as it appeared in 1640, we find the general aspect of the town remained without much visible alteration for the space of 100 years after the description given by Leland, and affords a very humble contrast to the prospect of Birmingham as viewed from nearly the same spot, an engraving of which we give in the present Number.

As a continuation of the general history of Birmingham, it may here be mentioned that King Charles I. imposed his obnoxious tax under the name of "ship-money," the inhabitants of Birmingham opposed the royal cause with persevering energy and various success. Adjoining Birmingham is the parish of Edgbaston, (a part of the present borough) which in 1643 probably did not contain twenty houses. It is now occupied by the villas of the rich manufacturers of the town. In this village there was, in 1642, a moated mansion called Edgbaston House. We learn from Dugdale that this house was garrisoned for the Parliament, and commanded by a person of the name of Fox.

The history of Birmingham, as the Midland metropolis of art and manufacture, may be divided into three periods. The first period may be supposed to have terminated at about the restoration of King Charles II. Down to this time (the Restoration) though Birmingham had been a manufacturing town from unknown antiquity, her artisans, in general, kept themselves within the smoke of their forges, to execute such orders for implements of war, and husbandry, carpenters' and other tools, kitchen utensils, and such articles as might be periodically ordered of them, by those who required them, or by merchants or their itinerant agents.

At the Restoration, therefore, may be said to commence the second period of the manufacturing history of Birmingham, when a travelled king and a luxurious court

introduced a taste for articles of a more elegant and costly description than those that had been previously in demand, and Birmingham naturally took the lead in the manufacture of them. Thus she proceeded in her prosperous career of industry and skill to that important æra—the discovery of the steam-engine. The magnitude and commercial importance of the works consequent on this discovery, as well as some of their effects on the progress of art, are described in the account of Soho, published in our Magazine of September the 5th, 1835; but we shall here enter into some further details of the modern manufactures of Birmingham, as illustrative of the third or modern period of her manufacturing history.

In the meantime we may here be allowed to state the curious fact that, notwithstanding the constant increase of Birmingham in extent, population, and manufacturing importance, she continued to a late period in a state of comparative insignificance as a thoroughfare or road town. It has already been noticed that Speed never mentioned Birmingham in his notices of Warwickshire; nor, in fact, did any of the principal roads pass through it: and within the memory of persons now living, letters from the north were directed "To Birmingham, near Wednesbury," while some of the London and other southern correspondents subscribed their letter "To A. B., Birmingham, Warwickshire." And one adds, "N.B. Turn at Coleshill." Wednesbury was then a post town, while Birmingham, though a more important and populous place, was not, from the circumstance of its not being situated upon any of the great roads.

One of the most flourishing manufactures of Birmingham was that of the shoe-buckle. When this ornament was in fashion, about 2,500,000 pairs were annually made here, giving employment to about 5000 artisans. The buckle was worn for about a century in England. It came in not much larger than a horse-bean, with the Prince of Orange; and from having taken all shapes, it expanded out into such unnatural, ugly, and troublesome disproportions, that the eye rejected it and the foot spurned it away, and so it went out of fashion.

The button manufacture, having the same foundation in utility and vanity, but without the liability to ugliness and disproportion, which appears to have attended the buckle, continues to be an important branch of Birmingham manufacture. The manufacture of buttons comprises about sixty separate branches of handicraft, many of which are assigned to females and boys. The sweepings of the manufactory of the late Mr. Taylor, where the costly metals were used, receiving the filings and minute particles which fly off during the various operations, are said to have been sold annually to the sweep-washer for 1000*l.* In the manufactory of Messrs. Heaton forty tons of button-shanks have been made annually; and the whole number of shanks made annually in Birmingham is estimated at 600,000,000.

Swords are supposed to have been made in Birmingham in the time of the Britons; but fire-arms are a comparatively modern invention, and the manufacture of them appears to have been almost, if not entirely, confined to London down to the revolution in 1688. The society of gun-makers was incorporated in the 13th Charles I. (1638) under the name of the Master, Wardens, and Society of Gun-makers of the City of London, from whose manufactories the parliamentary forces in the civil wars were supplied with fire-arms. But soon after the Restoration, this branch of manufacture naturally found its way to Birmingham.

It appears that English manufactured fire-arms were not held in very high estimation in the early part of the reign of William III.; for it is said, that being heard at one of his levées to express much regret that

he was obliged to import fire-arms from Holland at much expense and with great difficulty, Sir Richard Newdigate, one of the members of Parliament for the county of Warwick, being present, opportunely recommended his Birmingham constituents to his Majesty's notice as being fully competent, if duly patronized, to obviate the difficulty complained of. The king immediately despatched Sir Richard Newdigate into Warwickshire with an extensive order, and Birmingham has ever since been as famous for the manufactory of fire-arms as for all other ingenious productions.

No adequate provision of fire-arms being made by the English Ordnance Department of the last century, the emergency of 1793 was to an alarming degree unprepared for. Lieut.-Col. Miller was employed for a year or two conveying orders to the different gun-manufactories in Germany, to procure arms for the British forces. But the manufacture of fire-arms was subsequently carried to such an extent in England, that from 1805 to 1815, 3,079,120 gun-barrels and 2,935,787 locks, for the use of government, were manufactured in Birmingham alone; of which, 1,827,889 were completed as musquets, carbines, &c. The supply was in general 30,000 stand of arms per month, or two in a minute! This number is exclusive of fire-arms manufactured there for the East India Company's service during the same period, to the number, as it has been calculated, of about 1,000,000: and exclusive, also, of trading guns, fowling-pieces, &c. These facts are interesting, not only as regards the manufacturing capabilities of Birmingham, but as shewing the amazing power of the British government in having such a manufactory in the centre of the kingdom, from which supplies of arms can be distributed in all directions, for defence or annoyance, far exceeding in amount, as it appears by official returns, all the fire-arms manufactured in the chief manufactories of France, from the banks of the Rhine to the foot of the Pyrenees.

On the superiority of this destructive engine of warfare, as manufactured in Britain, and wielded by the British soldier, M. Dupin makes the following remarks: "Besides the attention bestowed upon the musquet itself, every expedient for increasing the effect of its fire is likewise sought by the British. The locks of the English musquets are of better workmanship than those hitherto manufactured by any other nation of Europe; they will less frequently miss fire upon a given number of rounds than all the rest. This applies equally to the goodness of the fine powder, which possesses great strength, burns without leaving either foulness or residue, that, by adhering to the lower part of the hammer, could fall among the priming and prevent its taking fire. With the union of these advantages, let us suppose an infantry, whose characteristic solidity and calmness have received the aid of discipline in rendering them immovable;—let us imagine them placed in such a position, as those always chosen for English lines, well situated by nature and fortified by art,—let such an infantry receive orders to await the attack of their enemy on the ground they occupy. They commence their fire in two ranks as soon as the assailing columns, after having suffered all the fire of the artillery converging upon them, arrive within good range of the English musquet. Let us conceive the effects of fire maintained with resolute calmness, which enables the soldier deliberately to load his arms, take steady aim, and use activity without haste, and we shall then form an idea of the power of the English line—even of two ranks only—at the moment most critical for its safety."

The Ordnance Department purchased some land in Banbury-street, Birmingham, on the bank of the canal, and erected a proof house for fire-arms, with an inspecting room, for the purpose of proving, inspecting,

and marking, according to the provisions of an Act of Parliament, all gun-barrels, locks, bayonets, &c., fabricated in the town. This establishment was incorporated by the same act, and consists of the lords-lieutenant of the counties of Warwick, Worcester, and Stafford, the members of parliament for those counties, the high and low bailiffs of Birmingham, the acting magistrates within seven miles, and fifteen individuals connected with the gun manufacture in Birmingham. We will here give a description of the Birmingham proof house, as translated from M. Dupin's work 'On the Military Forces of Great Britain.'

"The spot on which all fire-arms fabricated in Birmingham and its vicinity are proved, whether intended for the state or for the purposes of commerce, is a rectangular space, inclosed by walls from four to six yards in height. To this place there is but one entrance, in front of which is an exterior court, surrounded by a grating, and containing several pieces of cannon in battery, placed there merely to indicate that it is a military establishment. The buildings connected with the site for proving arms form three of the four sides of the interior court; at one extremity of which, and detached, is a small powder magazine. One part of the range of buildings is occupied by offices; on the right, as you enter, is a foundry for balls, and on the left, the apartment for proving the arms.

"You first cross two ante-rooms, where the arms are charged; you then pass into a small place, where they set fire to the powder by means of a red-hot iron rod; this is inserted through a small hole in the wall which encloses the room where the barrels are set for the proof. All the interior of this room is lined with plates of cast iron, from three quarters of an inch to an inch in thickness; the door and window-shutters of the apartment are also of cast iron.

The barrels are set in two iron stocks; the upper surface of one of which has a small gutter, to contain the train of powder; on this train the barrels rest with their touch-holes downwards, and in the rear of the breeches of the barrels is one mass of gravel, while a second is formed before the muzzles of the pieces under proof to receive the balls. When the train of powder is laid, and the gun or pistol-barrels laid on the stocks, the window-shutters are closed, and fire is set to the train, as already mentioned, from without. From the complete mode in which every aperture in the proving-room is closed up, scarcely a sound escapes when the explosion takes place; immediately afterwards the window-shutters are opened, the smoke dissipates, and they find in the mass of gravel the barrels which have been buried in it by the force of the recoil.

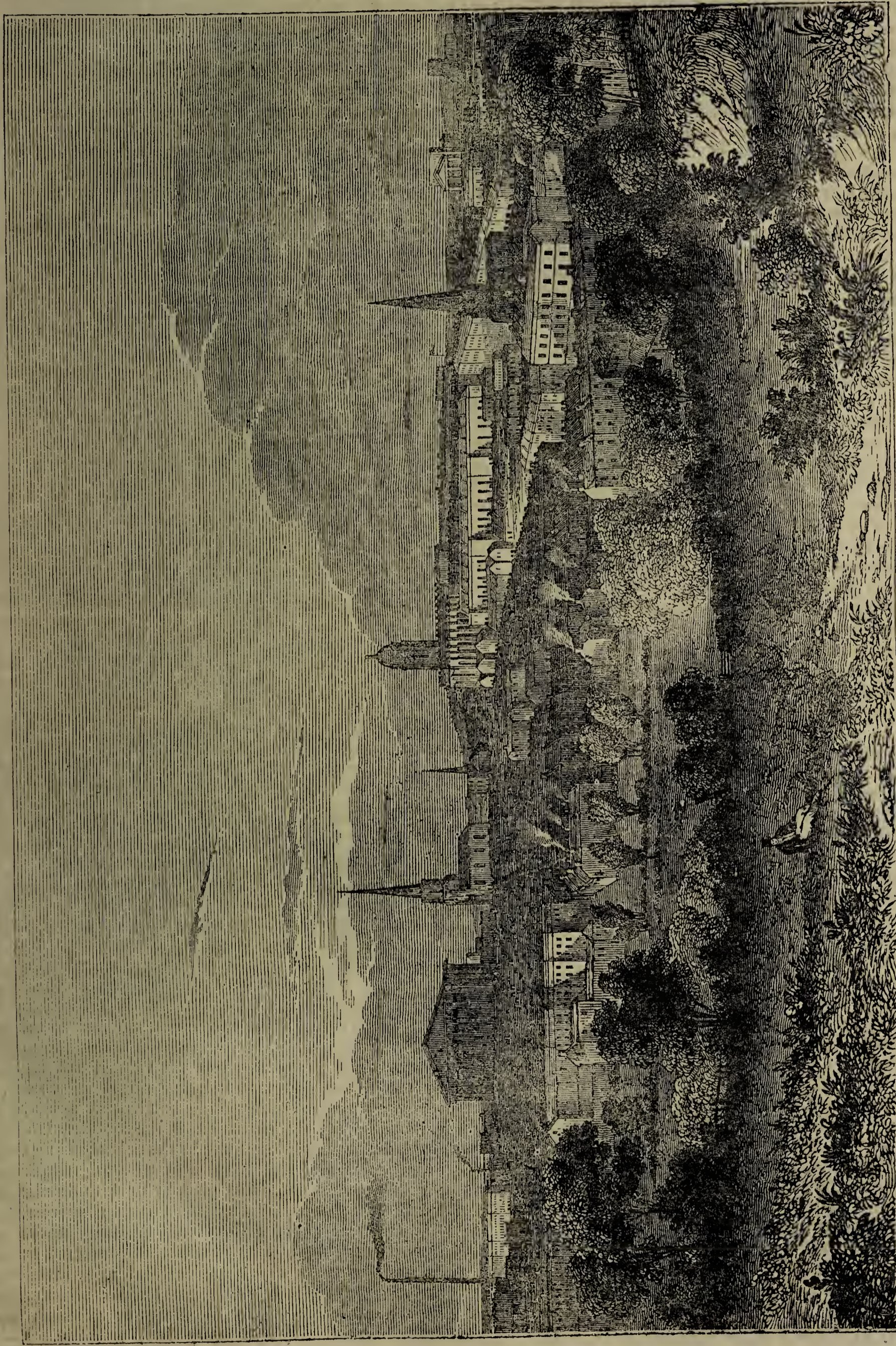
"The barrels are all proved with a double charge of powder and ball, and are not examined until twenty-four hours after the proof of firing. It is required that the salt-petre shall not appear on any part of the exterior surface; the stamp is then set upon those barrels that are good, while the bad ones are broken to pieces in a vice, by means of a machine prepared for the purpose."

The limited extent of this article precludes the possibility of giving anything like a detailed account of the Birmingham manufactories; for to explain the mechanism, powers, and productions of the steam-engine, the rolling-mill, the lathe, the stamp, the press, and the draw-bench would alone fill volumes. But we may give a sketch of the former state of the iron-works in the neighbourhood on which the business of the town so materially depends.

Dr. Plot, in his 'Natural History of Staffordshire,' published in 1686, after an exulting description of the then existing mode of operation on the iron ore of the county, makes a contemptuous allusion to the proceedings of "our ancestors, who in their imperfect way,

only made at one furnace 100 lbs. of iron per day." This imperfect way consisted, as he tells us, in the attempted urging of the heat to the required temperature, by the strength or weight of the workman, through the means of "*foot-blasts*, or *treddles*," acting on some kind of bellows; the power of the horse, or of the dammed up stream, not having been yet applied. The improved mode of working brings us down to the era when Plot himself visited and described the coun-

try—the reign of James II.; when, as the doctor declares, a single furnace, by the assistance of "two vast pair of bellows, compressed alternately by a water-wheel," would produce "two or three tons of iron in twenty-four hours;" and when "the new invention of slitting mills" seemed to leave nothing to be desired. These glories of the art are declared in full by the doctor, who concludes, as well he might, "The iron-works are now exercised in perfection." One of the



[Modern View of Birmingham.]

most remarkable of the contrasts which exists between the state of the trade at that period and at present, as described in the work which we are quoting, (Smith's 'Birmingham and its Vicinity,') is afforded by the wide distance at the former period of the several establishments for smelting the ore. Charcoal was employed for the purpose; and it was necessary to establish the furnaces in neighbourhoods continually becoming fewer where charcoal could be obtained, and where, at the same time, a stream existed with sufficient fall to turn the wheel that should act on the bellows, raise the hammer, or whirl the rollers; and the performance of one of these operations was generally as much as could be effected by the gravitating force of the water. From the operation of these causes, the furnace was of necessity placed at a distance from the mine, and the forge and the mill (unless in the case of very powerful streams) were far separated from the furnace and from each other, in order to keep the great consuming powers apart. These indispensable requisites of wood and water induced the establishment of iron furnaces in situations whence, as soon as coke and steam superseded their use, all trace of the iron manufacture vanished.

The eighteenth century was drawing to its close, and still no considerable change in this state of things had taken place. Previously to the year 1780, the Staffordshire mining country might still have been viewed in Dr. Plot's portrait of it; "vast bellows, alternately compressed," were still employed, with indifferent success, to produce the continuous blast at the furnaces; the atmosphere was comparatively guiltless of smoke: the ore, when raised, was borne to the nearest woodlands, in order to have the benefit of the use of charcoal. This fuel, from its lightness and cumbersomeness, was more difficult of conveyance in fitting quantities, through the deep and narrow roads of the time, than was the ponderous, compact, and more manageable mineral itself. The removal was therefore still made, and along the profound lanes, of which here and there a few traces still remain, the ore was conveyed in various directions towards the existing furnaces, on the backs of horses, perpetually moving in long array, to keep up the indispensable though dribbling supply. And such was the tranquil character of the trade in those days; so little of the stirring competition of later years existed that the additional price laid on the wrought material was unthought of. Capitals, too, were smaller than at present; and a furnace, a forge, or a rolling and slitting mill was, each singly, a sufficient undertaking for an individual speculator. In France the absence of coal still induces similar removals, which have to a certain degree a similar effect in keeping up the price of iron in that country.

Whatever may be the exigencies of state, the fluctuations of trade, or the caprices of fashion, Birmingham has now reached such a state of superiority in the manufacture of articles of indispensable utility, as well as of those connected with the elegancies of life, that her future progressive importance is a matter of moral certainty. Should war again break out, from Birmingham the great demand for instruments of warfare must be supplied; and thus a state of things that must be more or less disadvantageous to most other places, will add to the manufacturing importance, the wealth, and extent of Birmingham. Should peace happily prevail, and population continue to increase, the necessary implements for a more perfect cultivation of the soil than has hitherto been in practice, will not be found the least important amongst the objects of her future skill and industry.

Birmingham is with good reason reckoned a healthy town, containing at all times as many instances of longevity as can be exhibited in any other district in the

kingdom. There were but few cases of cholera in Birmingham, though that dreadful epidemic raged in the neighbouring villages of Staffordshire to a great extent. The smoke of the town, issuing from the chimneys of the furnaces, makes a formidable appearance in a distant view, but there is little real atmospheric impurity to be perceived on a nearer approach. This is partly owing to the great height of those chimneys, but more especially to the sort of coal used, it being lighter than Newcastle coal, and consequently depositing fewer of those particles of black which thicken the air of London and other places.

No part of the town lies on a flat surface. The river Rea, being too insignificant to hold out any inducement for the formation of wharfs, the builders began early to spread themselves up the acclivity, commanding a southern aspect; so that, with the exception of the parts occupying the narrow spaces between those declivities which the progressive extent of the town ultimately reached, the town is built either upon or on the sides of hills: consequently, a heavy shower of rain of twenty minutes' duration will completely cleanse it, or such moisture as is not carried off by drainage, is as effectually taken off by evaporation, or by absorption into the red and sandy soil which prevails in the neighbourhood. Built on this bed of sand, Birmingham, before the practice of paving and draining came into use, must have been comparatively a clean and dry town. Until lately, the foot-ways in the principal streets were paved with stones found in the neighbouring fields. Compared with the thickly-populated parts of London, very few of the Birmingham people reside in cellars, nor do families live in lodgings, but in general each house is occupied by a separate family. Consequently, the town spreads over a vast extent of ground, the boundaries of the borough being about twenty miles in extent. The suburbs are very beautiful, but the most interesting parts, lying out of the great roads, are but little seen by strangers.

This account of Birmingham, which will be concluded in a succeeding Supplement, it is thought will be agreeably illustrated by the following notices of the appearance and manners of the adjoining districts, which we derive from two sources. The following paragraph is from Smith's 'Birmingham and its Vicinity:'

The person who now for the first time traverses our mining counties, with an eye to their peculiarities, is struck with astonishment at the extent and magnitude of the operations performed. He sees himself surrounded by unnumbered clouds of smoke which affect the entire atmosphere. He discovers buildings of peculiar and unwonted form—massive and Egyptian-looking pyramids of masonry, accompanied by chimneys which emulate in altitude and tenuity the tallest obelisk. Here and there he sees protruded the mighty arm of the giant of art, the potent steam-engine, whirling the heavy fly which regulates the motions of the whole attached machinery; while the sky is crossed by the light tracery of wheels and ropes, adapted to the purposes of the mines, both right and left of the moving power. The prospect, where the view is not impeded by the flat-topped mountainous ridges of cinder, is varied by numerous clustering hamlets, or assemblages of small houses, the habitations of the countless labourers and others called into activity by the neighbouring works, interspersed here and there with modern mansions of superior pretension, oddly placed; or with dwellings of a still less congruous character; curious specimens of fretted brick-work, embroidered chimney-stacks and chevroned gables; or black and white-timbered grange-houses, the relics of an agricultural age, invaded by the encroachments of smoke and bustle; all intermixed with a moderate supply of green or greenish fields, dotted occasionally with sooty sheep or cattle. Canals

with all their appurtenances intersect the region in every direction, and strange noises from every quarter are wafted to the ear. If the visiter venture to explore the penetralia of those establishments whose exterior has attracted his attention, he notes with admiration the fiery gleams, the rivulets of molten metal, the deafening roar of the seeming magic blast, which urges the fires to an intensity sufficient to "melt the stubborn ore;" the motion, the whirl, the power of machinery, the clangour of perpetually acting hammers, the labourers hurrying to and fro, the crowd without confusion.

The description of the Staffordshire Collieries which we are about to give, was published in Knight's 'Quarterly Magazine' in 1822:—

Many of my readers must recollect crossing, in the route from London to Holyhead, a miserable tract of country commencing a few miles beyond Birmingham and continuing to Wolverhampton. If the volumes of sulphureous vapour which I shall not compliment with the name of smoke, permitted them at intervals to "view the dismal situation waste and wild," they would observe the surface of the desert around them scarred and broken, as if it had just reposed from the heavings of an earthquake: Now and then they would shudder as they passed the mouth of a deserted mine left without any guard but the wariness of the passenger. Sometimes they would see a feeble and lambent flame, (called by the miners the wild fire,) issue from chaps in the parched earth. It is self-kindled by a process familiar to that chemist, and feeds on gas evolved by the refuse of the coal that has been left in immense caverns, hollowed by the labours of ages, over which the carriage of the unconscious traveller rolls for many miles. They would be struck also with the sight of houses from which the treacherous foundations have gradually shrunk, leaving them in such a state of obliquity with the horizon, as if they stood only to evince the contempt of themselves and their inhabitants for the laws of gravitation.

If the traveller, in addition to these attacks on his organs of smell and of vision, has nerve to inspect more closely the tremendous operations which are going on around him as far as the eye can reach, he must learn to endure the grating of harsh wheels, the roaring of the enormous bellows which, set in motion by the power of steam, urge the fires of the smelting furnace till they glow with almost the bright brilliance of the noon-day sun. He must learn to care little for the sparks which fly from the half-molten iron, under the action of the forge, in torrents of burning rain, while the earth literally trembles beneath the strokes of a mightier hammer than Thor himself ever wielded against giants.

But my present business is with the human part of the spectacle. The miners, or, as they call themselves, the colliers, are a curious race of men, and the study of their natural history would be replete with information and entertainment. Nothing can well be more uncouth than their appearance. Their figures are tall and robust in no ordinary degree, but their faces, when, by any accident, the coating of black dirt in which they are cased is partially rubbed off, show ghastly pale, and even at an early age they are ploughed in the deepest furrows. Their working dress consists of a tunic, or short frock, and trowsers of coarse flannel. Their holiday clothes are generally of cotton velvet, or velveteen as I believe the drapers call it, decorated with a profusion of shining metal buttons; but they seem principally to pique themselves on their garters, which are made of worsted, and very gay in colour: these they tie on, so that a great part, as if by accident, appears below the knee. Their labour is intense. They stand, sit, or crouch for hours, often in the most irksome posture, undermining rocks of coal with a pickaxe. Not

unfrequently they are crushed beneath the weight of the superincumbent mass, or suffocated by a deleterious exhalation, which they call by the expressive name of the "choke damp," and sometimes they are scorched by the explosion of the hydrogen which is generated in the depths of the mine—a disaster from which the beautiful invention of Sir Humphry Davy, the safety-lamp, does not always preserve them. This evil is not, however, attributable to any imperfection in the instrument, but to the astonishing recklessness of the men, who are with difficulty prevailed upon to observe the plainest and most simple directions even in matters of life and death.

The high cheek bones and the dialect of these people seem to argue them of northern descent. Perhaps in some remote age they may have swarmed from the Northumbrian hive to seize on the riches of the less adventurous or intelligent Southrons. Be that as it may, they have clearly no similarity either in speech or feature with the peasantry of the neighbouring districts. They have also manners and customs peculiar to themselves. One in particular is the non-observance, or at least the very irregular observance, of the common rule for the transmission of the surname. What rule they follow I cannot say, but it often happens that a son has a surname very different from that of his father: sometimes a man will have two sets of names, as John Smith and Thomas Jones, and that without any intention of concealment; but, except on high occasions, as a marriage or a christening, they rarely use any appellation except the cognomen or nick-name. The Latin word is the best, because the English implies something inconsistent with the staid and regular usage of the epithet by all persons connected with the subject of it, his wife, his children, and himself included.

I knew an apothecary in the collieries, who, as a matter of decorum, always entered the real names of his patients in his books: that is, when he could ascertain them. But they stood there only for ornament; for use he found it necessary to append the *soubriquet*, which he did with true medical formality, as for instance, "Thomas Williams, *vulgo dict.* Old Puff." Serious inconvenience not unfrequently arises on occasions where it is necessary to ascertain the true name and reduce it to writing, not only from the utter ignorance displayed by the owner of all the mysteries of spelling, but from his incapacity to pronounce the word, so as to give the slightest idea of what its orthography ought to be. Clergymen have been known to send home a wedding party in despair after a vain essay to gain from the vocal organs of the bride or bridegroom, or their friends, a sound by way of name which any known alphabet had the power of committing to paper. The habit of using the cognomen is so common, that the miners apply the custom to strangers with an unconsciousness of offence quite classic. If a traveller should be hailed by the epithet "nosey," he should recollect that Ovid endured the same treatment in the court of Augustus without dreaming of an affront, and he may even flatter himself that he bears some outward resemblance to the great poet.

Indeed, in all communications with persons of higher rank, the miners preserve a bold simplicity of manners far different, at least in my mind, from insolence. I recollect passing through the little town of Bilston at the time of the first abdication of Bonaparte, and being accosted by one of a group of colliers, who, with black faces and folded arms, were discussing the events of the day, with an interrogation, which, imitated in print, might stand thus: "Oy say, what dost thee think o' the paice, Beoots?"—which being rendered into our language is, "I say, what dost thou think of the peace, Boots?" My boots were, I suppose, that part of my dress by which I was most conspicuously distinguished from the natives. This I understood as

a friendly invitation to a conference on the state of affairs, and my feelings were no more hurt by the designation bestowed on me than those of Hercules ever were by the epithet *Claviger*.

But I had made this race of people in some sort my study. I remember once mounting rather hastily the outside of a stage-coach which was passing through the coal district, and setting myself down in the first place that offered itself, without taking time to reconnoitre. When I had opportunity for inspection, I found at my right an old man with a rope coiled round him like a belt, by which my practised eye at once recognised him for a canal boatman, carrying home his towing-line. On my left was a personage whose dress was not a little equivocal, consisting of a man's hat and coat, with something like petticoats below. The mysterious effect of this epicene costume was heightened by the wearer's complexion, which reminded the spectator of dirty wash-leather. A short pipe adorned the mouth, with which it seemed well acquainted; and the *tout ensemble* sat in deep silence. These diagnostics, and especially the last, might have imposed on a novice the belief that the subject of my observation was of the worthiest gender, as the grammarians uncivilly term the masculine; but I knew my *compagnon de voyage* at a glance for one of the softer sex, and treated her with becoming attention. To all my politeness she returned little more than a nod and a whiff. At length my fellow passengers began to converse, or rather, I suppose, to resume a conversation which I had interrupted. The lady, I found, was of the same profession as the gentleman on the other side—a conductor of boats. They appeared not to have had much, if any, previous acquaintance, but seemed drawn together by community of sentiment and pursuit. They were soon engaged in an occupation interesting alike to all ranks of society—namely, an inquiry into the characters of their common friends. As their conversation illustrates in some degree the manners of this people, I will give a short specimen of it in the original, together with a glossary for the benefit of the mere English reader.

Lady.—Dun yo know Soiden-mouth* Tummy?

Gentleman.—Eees: an' a 'neation good feller he is tew.

Lady.—A desput quiet† mon! But he loves a sup o' drink. Dun yo know his woif?

Gentleman.—Know her! Ay. Her's the very devil when her sperit's up.

Lady.—Her is. Her uses that mon sheamful—her rags‡ him every neet§ of her loif.

Gentleman.—Her does. Oive known her come into the public||, and call him all the neames her could lay her tongue tew afore all the company. Her oughts to stay till her's got him i' the böat, and then her mit say what her'd a moind. But her taks aiter her feyther.

Lady.—Hew was her feyther?

Gentleman.—Whoy, singing Jemmy.

Lady.—Oi don't think as how Oi ever know'd singing Jemmy. Was he ode Soaker's brother?

Gentleman.—Ees, he was. He was the wickedest, swearinst mon¶ as ever I know'd. I should think as how he was the wickedest mon i' the wold, and say he had the rheumatiz so bad!

Many anecdotes might be collected to show the great difficulty of discovering a person in the Collieries without being in possession of his nickname. The following I received from a respectable attorney. During his clerkship he was sent to serve some legal process on a man whose name and address were given to him with legal accuracy. He traversed the village to which he had been directed from end to end without success; and, after spending many hours in the search, was about to abandon it in despair, when a young woman, who had witnessed his labours, kindly undertook to make

inquiries for him, and began to hail her friends for that purpose.

Oi say, Bullyed, does thee know a mon neamed Adam Green?

The Bull-head was shaken in sign of ignorance.

Loy-a-bed, dost thee?

Lie-a-bed's opportunities of making acquaintance had been rather limited, and she could not resolve the difficulty.

Stumpy (a man with a wooden leg), Cowskin, Spindle-shanks, Cock-eye, Pig-tail, and Yellow-belly, were severally invoked, but in vain, and the querist fell into a brown study, in which she remained for some time. At length, however, her eyes suddenly brightened, and, slapping one of her companions on the shoulder, she exclaimed, triumphantly, "Dash my wig! whoy he means moy feyther!" and then turning to the gentleman, she added, "Yo should'n ax'd** for Ode Blackbird."

Now and then, but not very frequently, groups of these children of nature may be seen wandering about the streets of Birmingham, with much the same sensations as the Indians experience at New York or Philadelphia. It was at Birmingham that the Roscio-mania, as Lord Byron calls it, first broke out, and in a few weeks indistinct rumours of Young Betty's fame caught some ears even in the coal-mines. One man, more curious or more idle than his fellows, determined to leave his work, and see the prodigy with his own eyes; and having so resolved, he proceeded, although in the middle of the week, to put on a clean shirt and a clean face, and would even have anticipated the Saturday's shaving, but he was preserved from such extravagance by the motive which prevented Mrs. Gilpin from allowing the chaise to draw up to her door on the eventful morning of the journey,

“————— lest all
Should say that she was proud.”

But notwithstanding this moderation he did not pass unobserved. The unwonted hue of the shirt and face were portents not to be disregarded; and he had no sooner taken the road to Birmingham, than he was met by an astonished brother, whose amazement, when at last it found vent in words, produced the following dialogue: Oi say, sirree, where be'st thee gwain*?—"Oi'm agwain to Brummajum."—"What be'st agwain there for?"—"Oi'm agwain to see the Young Rocus."—"What?"—"Oi tell thee Oi'm agwain to see the Young Rocus."—"Is it aloive?"

* You should have asked.

† Going.



[Staffordshire Colliers.]

* The Office of the Society for the Diffusion of Useful Knowledge is at 59, Lincoln's Inn Fields.

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* With the mouth aside. † Desperately quiet.
‡ Scolds outrageously. § Night. || Public-house.
¶ Most given to swearing.

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TAR-MAKING IN BOTHNIA.



[Tar-Making.]

TAR is a thick, black gum, obtained from the fir-tree by burning. Pitch is the name applied to the same article when thickened by boiling. The vast forests of the north of Europe are necessarily the spots to which the manufacture of tar on an extensive scale is confined. Thus, in the year 1833, there were imported into Great Britain 10,152 lasts of tar, all of which, with the exception of 1231 lasts, came from the forests of northern Europe. Russia supplied us with 7980 lasts, Sweden 442, Denmark 415, and Norway 83. The duty amounted to 760*l*. Each last contains twelve barrels; and a barrel holds about thirty gallons. The German name for tar is "theer," and the Swedish "tjära," so that the English word is clearly to be traced to a northern origin.

The process of making tar was known to the Greeks, and has been described by Theophrastes and Dioscorides. Dr. Clarke, who has described the method of extracting tar in Russia, Sweden, and other northern countries, says, "There is not the smallest difference between a tar-work in the forests of Westro-Bothnia and those of Ancient Greece. The Greeks made stacks of pine, and having covered them with turf, they were suffered to

burn in the same smothered manner; while the tar, melting, fell to the bottom of the stack, and ran out by a small channel cut for the purpose."

The following is Dr. Clarke's account of tar-making in the north of Europe:—"The inlets of the Gulf of Bothnia are surrounded by noble forests, whose tall trees, flourishing luxuriantly, covered the soil quite down to the water's edge. From the most southern parts of Westro-Bothnia to the northern extremity of the Gulf, the inhabitants are occupied in the manufacture of tar, proofs of which are visible in the whole extent of the coast. The process by which the tar is obtained is very simple; and as we often witnessed it, we shall now describe it, from a tar-work we halted to inspect upon the spot. The situation most favourable to the process is in a forest near to a marsh or bog, because the roots of the fir, from which tar is principally extracted, are always most productive in such places. A conical cavity is then made in the ground (generally in the side of a bank or sloping hill); and the roots of the fir, together with logs and billets of the same, being neatly trussed in a stack of the same conical shape, are let into this cavity. The whole is

then covered with turf, to prevent the volatile parts from being dissipated, which, by means of a heavy wooden mallet, and a wooden stamper worked separately by two men, is beaten down and rendered as firm as possible above the wood. The stack of billets is then kindled, and a slow combustion of the fir takes place, without flame, as in making charcoal. During this combustion the tar exudes; and a cast-iron pan being at the bottom of the funnel, with a spout which projects through the side of the bank, barrels are placed beneath this spout to collect the fluid as it comes away. As fast as the barrels are filled, they are bunged and made ready for exportation. From this description it will be evident that the mode of obtaining tar is by a kind of distillation *per descensum*; the turpentine, melted by the fire, mixing with the sap and juices of the fir, while the wood itself, becoming charred, is converted into charcoal."

CHINA.—No. IX.

THE PETCHEE, ORANGE, PEAR, GINSENG, AND RHUBARB.

THE fruits of China are numerous; almost every fruit known in Europe is found in China; and though generally, from the want of a proper mode of cultivation, they are inferior to those produced in our gardens, there are some which surpass anything we can produce, and they have many fruits which we know only by name. The guava, the shaddock, the mango, and the pine-apple they possess, in common with the inhabitants of our Indian possessions; but they have also some which are found only in China. The letchee, a fruit about as large as a walnut, is said to be delicious; it is frequently exported to India in a dried state, wrinkled like a French prune: the Chinese take it in this state with their tea, preferring the pleasant acid of this fruit to the sweetness of sugar. But the most curious of all the fruits of China, if all that has been said of it were true, is the petchee. This plant is a sort of water-lily, to the roots of which a white substance is attached, covered with a red skin; the white substance is eatable, and is confidently said to have the strange property of rendering copper eatable. Many whimsical theories have been started to account for such a wonderful property, some chemical, and others mechanical; but a French Jesuit took the more simple course of trying the experiment. He placed a Chinese cash in his mouth, enveloped in a bit of petchee, and he actually found that on a resolute bite with good teeth, the cash (which is a very brittle cast alloy of copper) broke into small pieces, but that the pieces were as far from being eatable as before; and that the same effect could be produced by enveloping the cash in a piece of leather sufficiently thick to preserve the teeth from injury. Many strange stories, if heard with similar scepticism, would probably be explained with equal ease.

Though the orange is now completely naturalized in Europe, we must not forget that it was originally a native of China. It was brought first to Europe in the sixteenth century, by the Portuguese: the original tree from whence all the oranges in Europe have been produced was shown not many years since at Lisbon. This delicious fruit was certainly unknown to the ancients, although it has been contended that the golden apples of the Hesperides so frequently mentioned by them, were nothing more than oranges; but had this fruit ever grown in Europe, it is very improbable that a tree of such easy cultivation would have wholly perished in the darkest ages, however the fruit might have degenerated. It is more probable that the apricot was the fruit so distinguished in ancient times, and the name (Crisomele, or golden apple) vulgarly given to this fruit in the south of Italy, affords some weight to the conjecture. The name Portugallo, given to the

orange by the inhabitants of great part of Italy, shows from what part of the world *they* at least received this valuable fruit.

If we admit that the orange was introduced by the Portuguese, and was then an unknown fruit in Europe, it must strike us as a curious omission, that that minute observer Marco Polo should never have mentioned it, though he describes several sorts of fruits, and among others, "pears of an extraordinary size, weighing ten pounds a-piece; that are white in the inside like paste, and have a very fragrant smell."

As the largest pears in Europe are not found to exceed the weight of two pounds, so extraordinary a weight as ten was included among the exaggerations or inventions of the old Venetian; but modern travellers have confirmed the fact that pears of uncommon magnitude are produced in the provinces of China. "Along the road," says Van Braam, the Dutch envoy, "people sold us pears which are here very large. Yesterday I had one given to me, the circumference of which in its oblong sense, was fifteen inches and a half, by fourteen inches thick. This seems to be the only species of pear found in the northern provinces. Its colour is a beautiful golden yellow, the skin is rather hard, but the fruit is very juicy, melting in the mouth, and very agreeable to the taste." As the pear was found in a northern latitude and at a poor village, it may be conceived that those raised in a mild climate and for the consumption of a luxurious capital, might have attained the higher perfection mentioned by Marco Polo. De Guignes also describes this fruit as very large and excellent.

Europe has received only one sort of orange from China, but there are many beautiful species in their native country which would well repay the expense of importation. The sort most admired by the natives themselves is small, smooth, and reddish; the skin is very thin, and the pulp firmer than in those of our gardens; it is not divided by partitions like ours, nor does it so easily quit the rind. The oranges of Fokier are larger and of a fine red colour; these are more admired than the former by Europeans. Those of Canton are still larger and yellow; they are usually roasted and filled with sugar before they are eaten.

We must not omit to mention the far-famed ginseng, which the Chinese consider the most valuable production of nature. It is their specific for all disorders of the lungs or of the stomach, curing asthma, strengthening the eye-sight, renewing a worn-out constitution, and delaying the approach of old age, thus rivalling the professions of the most fearless quacks of the present day. These virtues are most probably over-rated, as Europeans have not found the same good effects from this plant as are ascribed to it by the Chinese: we have, however, some authority for admitting that, when fresh, its imputed good qualities are not wholly imaginary. The Père Jartoux, when employed in constructing a map of Tartary by order of the emperor Kam-he, frequently made an infusion of the ginseng-leaf, or drank the decoction of its root, and felt himself always much better after its use; when exhausted by a hard day's work, by walking over the rugged plains, or climbing to the elevated stations proper for measuring extensive angles in the prosecution of a great undertaking, he invariably found himself much relieved by this remedy. We have, however, often found the same effect produced in England by two or three cups of good tea, and are inclined to imagine the virtues of the ginseng to be of no very superior stamp. The Dutch naturalists thus described the ginseng:—"Its name is taken from its shape, because it represents a man (in Chinese *Gin*) striding with his legs. It is a larger and stronger species of our mandrake. The dried root is of a yellow colour, streaked round with blackish veins, as if drawn with

ink. It yields when chewed an unpleasant sweetness, mixed with bitterness. The Chinese will give three pounds of gold for one pound of it.

To the Chinese this plant is in some measure a foreign production, as it is found only in Manchoo Tartary; but it does not owe all its reputation to its distant origin; the Tartars also prize it, and give it a name (Orhota) expressive of its quality as the chief of plants. They endeavour to procure it at the risk of losing their lives or liberty, equally endangered by the nature of the country where it is found, and by the policy of the Chinese government, which endeavours to monopolize this much esteemed production.

A large extent of country to the north-east of Peking, covered with inaccessible mountains, and almost impassable forests infested with wild beasts, and affording no means of subsistence, is separated from the province of Leao Tong by a strong barrier of stakes, always carefully protected by guards of Chinese soldiers who seize and punish unlicensed intruders: this is the native country of ginseng, and these precautions are considered necessary to preserve the valued plant from depredation.

The above-named Père Jartoux, while employed in the survey of Tartary, describes the mode of gathering the ginseng, as it was practised at that time; his authority on this head is undeniable, as he frequently met with the parties of Tartars employed on the service. On this occasion ten thousand Tartars were commanded to gather all the ginseng that could be found; and after deducting two ounces from the quantity gathered by each man, they were allowed for the remainder its weight in pure silver. This army of botanists divided themselves into companies of a hundred men, with a chief to each company. The whole territory was then apportioned to the several divisions; each division formed a line, and slowly advancing, traversed the whole portion of country allotted to it; nearly six months were spent in the occupation, and the whole territory was thus searched through. This clumsy mode was probably adopted to give employment to a number of persons who might otherwise have been troublesome, as a tenth part of the number employed, if acquainted with the habits and localities of the plant, would have been more successful in discovering it.

These Tartars had little to subsist on but the flour of a sort of millet-seed which they carried with them; they slept usually under trees, merely covered with pieces of bark or such few clothes as they were able to carry with them. But few however perished on this expedition, and we may conclude the country, like most other mountainous tracts, to be very healthy, and proper for the reception of much of the surplus population of China, did not the peculiar policy of that Government discourage the residence of the people in any part of the empire which might possibly bring them in contact with any of the nations of Europe; and the extension of Russian power along the northern frontier of China, operates as a motive to withdraw the population as far as practicable from that quarter.

Of the ginseng when collected the root is the only part preserved: these are all buried in one place for the space of a fortnight, when they are taken out, washed, and carefully cleansed from dirt by a brush; they are then dipped for a moment in water nearly boiling, and dried over a slow fire, into which grains of a yellow sort of millet are thrown in order to communicate to the ginseng a colour admired by the Chinese, without which it would lose much of its marketable value. The root may be dried in the sun, and would preserve its virtues equally well, but the want of the favourite colour is a bar to the adoption of so easy and obvious a mode of preparation.

The rhubarb, so familiar to us as a useful simple medicine, is also a production of China. It grows in most

parts of China, but is most abundant near and beyond the Great Wall. The Chinese call it Tayhuan (dee vel-low) from its colour. Our name is of curious derivation. A river called Rhu runs through the savage country of the Tartars, beyond the Great Wall, and as the roots were originally gathered for the Europeans near that stream or sent across it, the material was denominated Rhu-barbarus, a compound of the name of the river, and the barbarous state of the country. Rhubarb found its way into Europe by land, by Kaskar, Astracan and Russia, or through Thibet and Persia, whence the Venetians carried it into Italy. The Dutch were accustomed to bring it by sea to Batavia, and thence to Holland. The men who hawk it about our streets, sometimes in a sort of oriental dress, are chiefly Jews from the coast of Barbary.

It is scarcely necessary to describe a plant which may be found in nearly all our gardens, and the stalks of which we use for puddings and pies. It is the root that contains the medicinal property, which our climate is not suited to develop.

When the Chinese dig them up they take great care to saturate the roots with their own juices, which are very apt to escape, and to deprive them of their virtue. They lay the pieces cut, upon a hollow table, and turn them twice or thrice a-day, that so the sap or juice may soak and dry by degrees into the pieces, and remain in them. When they have laid four days on the table they string the roots and hang them up in the shade to dry by the air.

The trade in this medicinal root seems to have been at all times very considerable.

Marco Polo speaks of its excellence and the immense quantities "which merchants who procured loadings of it on the spot, conveyed to all parts of the world;" and Du Halde informs us that while the missionaries were employed in making the maps of the mountainous region that forms the western frontier of China, they often met long strings of camels loaded with rhubarb.

BEAUMARIS CASTLE,

ISLAND OF ANGLESEY.

BEAUMARIS Castle was built by Edward I. about the year 1295, in pursuance of that policy which led him to secure his conquests by every precaution which he might think available. He had subdued the Welsh, after an arduous struggle; the last descendant of the ancient British princes had fallen in battle; and Edward aimed at keeping down for ever the insurrectionary spirit which might be expected to manifest itself whenever there was opportunity. The sovereignty of Anglesey, remarks Sir Richard Colt Hoare, in his edition of Giraldus Cambrensis, had been sturdily contested for above four centuries; it was the chosen seat of the Druids; it was the asylum to which the Britons fled for succour from the victorious Romans; it had been the residence of the British princes: and continued to the last to be their strong-hold. The circumstances which immediately preceded the war in which the Welsh were finally subdued, are in substance as follows:—Llewelyn, the last and one of the bravest of the sovereign princes of Wales, was obliged, in the year 1277, to sue for peace from Edward I. The terms on which it was granted were humiliating: besides the payment of large sums of money, the prince was required to come to London every Christmas to do homage to the king for his lands. The following story is told by Carte the historian; and it is quoted by Sir Richard Colt Hoare:—

"The barons of Snowdon, with other noblemen of the most considerable families in Wales, had attended Llewelyn to London, when he came thither at Christmas, A.D. 1277, to do homage to King Edward; and bringing, according to their usual custom, large retinues



[Beaumaris Castle.]

with them, were quartered in Islington and the neighbouring villages. These places did not afford milk enough for such numerous trains; they liked neither wine, nor the ale of London; and though plentifully entertained, were much displeas'd at a new manner of living which did not suit their taste, nor perhaps their constitutions. They were still more offend'd at the crowds of people that flock'd about them when they stirr'd abroad, staring at them as if they had been monsters, and laughing at their uncouth garb and appearance. They were so enrag'd on this occasion, that they engag'd privately in an association to rebel on the first opportunity, and resolv'd to die in their own country rather than ever come again to London as subjects, to be held in such derision; and when they return'd home, they communicat'd their resentments to their compatriots, who made it the common cause of the country."

In the war which ensued, which was a severely-contested struggle, Edward advanced into Wales by land, and sent the fleet of the Cinque Ports to Anglesey. When the brother of Llewelyn learned that they had taken that place, he exclaim'd "Llewelyn has lost the finest feather in his tail." The Welsh king was shortly afterwards slain, and when the body was discover'd, Edward, says Turner, "sent the head up to London, adorn'd in derision with a silver crown, that it might be exhibit'd to the populace in Cheapside, and fix'd upon the Tower." Edward's military talents and vigour of mind fitted him for his turbulent age: his policy was in many respects in advance of it; but he retain'd much of its savage fierceness. The brother of Llewelyn attempt-ing to renew the war, was defeat'd and taken; he was drawn on a hurdle, hanged, and his amputated head sent to London. In the Chronicles of Hollinshed, under the year 1295, there is the following account:—

"The Earl of Warwick, hearing that a great number of Welshmen were assembled together, and lodg'd in a valley betwixt two woods, he chose out a number of horsemen, with certain cross-bows and archers, and

coming upon the Welshmen in the night, compass'd them round about, the which, pitching the ends of their spears in the ground, and turning the points against their enemies, stood at defensive, as to keep off the horsemen. But the earl having plac'd his battle so, that ever betwixt two horsemen there stood a cross-bow, a great part of the Welshmen which stood at defence in manner aforesaid with their spears, were overthrow'n, and broken with the shot of the *quarrels*, and then the earl charg'd the residue with a troop of horsemen, and bare them down with such slaughter, as they had not sustain'd the like loss of people (as was thought) at any one time before. In the mean time, King Edward, to restrain the rebellious attempts of those Welshmen, caus'd the woods of Wales to be cut down, wherein before the Welshmen were accus'tom'd to hide themselves in time of danger. He also repair'd the castles and holds in that country, and build'd some new, as the city and castle of Beamarise, with other; so that the Welshmen, constrain'd through hunger and famine, were enforc'd within a while to the king's peace."

The erection of the Castle of Beaumaris, though consistent with Edward's policy, was an unnecessary stretch of prudence. He had already broken down the spirit of independence which inspir'd the native Welsh, without which, as he experienc'd in Scotland, strongholds are but a slight security. The only notable things which the garrison appear to have done were to quarrel with the country people, and, under pretence of keeping them quiet, to oppress them with great severity. In consequence, the garrison was withdraw'n from the time of Henry VII. to the year 1642, when, the Earl of Dorset being constable, his deputy furnish'd it with men and ammunition; and it was retain'd on behalf of Charles I. The first governor of the castle was a Gascon knight, Sir William Pickmore, who was appointed by Edward I. Twenty-four soldiers were allow'd for the guard of the castle and town.

During the Civil War, the inhabitants of Anglesey agreed to some strongly-expressed resolutions in behalf of Charles I. But the garrison of Beaumaris did not hold out long against the parliamentary forces; they however obtained an honourable capitulation. The castle was surrendered to General Mytton, who appointed Captain Evans his deputy. The estimated expense annually of keeping the garrison was, in 1653, 703*l*.

The motives which led Edward I. to aim at the subjugation of the entire island of Great Britain were chiefly those of military ambition. But the castle and town of Beaumaris are evidence of themselves that he foresaw the benefits which would result from the consolidation of the kingdom, and having subdued the Welsh, he sought to introduce something of civilization amongst them. Notwithstanding the nearness of the castles of Caernarvon and Conway, immense expense and pains were spent—and, as it proved, needlessly spent—on Beaumaris. The town indeed flourished for a time; but the castle was an incumbrance. The castle was the parent of the town, which Edward surrounded with walls, incorporated, and endowed with many privileges. The place was originally called Bover, but it was changed to Beaumaris, from, as the interpretation most generally followed, *beau* fine, and *marais* a marsh. A low marshy site was selected, for the purpose of having a fosse round the castle, which, being filled with water from the sea, would enable vessels of a small size, by means of a canal, to discharge their lading close under the walls of the fortress. In the 17th volume of the 'Beauties of England and Wales,' it is stated that "Part of this canal, till very lately, was visible under the name of *Llyn y Green*, and the chains for mooring the vessels at the quay. The lowness of the site, the expansive diameter of its circular towers and bastions, together with the dilapidated state of its walls, deprives the structure, though a prodigious one, of that prominent character and imposing effect so strikingly apparent in the prouder piles of Caernarvon and Conway. The shape approaches to an oblong square, comprising a case encircling the castle. This outer vallium consists of low but massy embattled walls, flanked by ten circular towers." The principal entrance of the castle faces the sea; within the fortified envelope, equidistant from the walls, is the body of the castle, the height of which far exceeds the envelope, and at a distance appears to rise majestically from it, as from a base. It is nearly quadrangular, with a grand round tower at each angle, and another in the centre of each face. The interior consists of an area, 190 feet square, with obtuse corners. The centre of the north-west side contains a great hall, seventy feet long and twenty-three broad, with a proportionate height; it has five large pointed windows, which form a handsome front to the inner quadrangle. On the eastern side of the area there are remains of a chapel, the sides of which are ornamented with receding pointed arches. The elegantly-groined roof is supported by ribs springing from pilasters, between each of which is a long narrow window. There was a communication between the several parts of the inner court by means of a narrow surrounding gallery, a portion of which is still entire. The ruins of the castle are covered with gillyflowers, but which, as is stated, grow nowhere else in Anglesey.

The castle was erected on lands belonging to several proprietors, whom Edward I. removed to distant places, remunerating them by estates, probably sequestered.

The castle is the property of the crown. Within the walls a tennis-court, fives-court, and bowling-green have been formed for the amusement of the inhabitants of Beaumaris. The reader will find some particulars respecting the town of Beaumaris in the 'Penny Cyclopædia.'

THE PLAGUE AT EYAM, IN DERBYSHIRE, IN 1666.

ONE of the most pleasant and most healthful of Peak villages is the little town of Eyam, (for in that neighbourhood town is synonymous with village.) It is situated among the hills to the westward of Sheffield, at about the distance of twelve miles, thirteen or fourteen from Chesterfield, and about twelve or thirteen from Buxton. Surrounded on every side by bleak and barren mountains, it appears to be one of the last places where a community would choose to take up an abode; yet, composed of plain, neat, cheerful cottages, each having a garden, and every interval filled up with trees of the most luxuriant growth,—its antique church showing its grey tower among the foliage, and every house partaking of that simple rural character which never fails to please—it presents a most agreeable picture of content and comfort. Such is Eyam at the present day; and though situated so near to the first manufactory of cutlery in Britain, the morals of its inhabitants are comparatively uncontaminated, and their manners approach nearer to primeval simplicity than we often find in similar situations.

Eyam is but little known. Although a good turnpike-road was made many years ago (in those times when road-makers preferred taking a line over the summit rather than round the base of a mountain), it is not much used. The town is consequently little visited but by a few strangers, who come to view its antique Cross, the tomb of Mrs. Mompesson, or the romantic dell in which stands the singular rock called Cucklett Church.

Eyam, though inhabited by a race of miners, of all classes in Derbyshire the one most remarkable for health and longevity, and even more secluded than at the present day, was, in the great plague of 1666, subjected to a most severe and fatal visitation. Here that dreadful malady committed the most fearful devastations;—and here, by the prudence, the energy, the devotedness of the pastor and his wife, the destroying pestilence was stayed, and the remainder of the nation spared from its influence.

The manner in which the plague was communicated to this remote village shows the virulence of its nature, and the caution that ought to have been used to prevent the spread of the contagion. A box of cloth was, during the affliction of London, sent to a tailor of Eyam, who no sooner opened it than he fell ill; all his family soon shared the same fate, and every person, except one, died. These were the first victims. The disease spread with an astonishing rapidity,—entering almost every house, and carrying off a part of every family. "The same cottage in many instances contained both the dying and the dead. Short indeed was the space between health and sickness, and immediate the transition from the death-bed to the tomb! Whenever symptoms of the plague appeared, so hopeless was recovery, that the dissolution of the afflicted patient was watched with anxious solicitude, that so much of the disease might be buried and its influence destroyed. In the churchyard, on the neighbouring hills, and in the fields bordering the village, graves were dug ready to receive the expiring sufferers, and the earth, with an unhallowed haste, was closed upon them.

'Over the friendly bier no rites were read,
No dirge slow chanted and no pall outspread;
While Death and Night piled up the naked throng,
And Silence drove their ebon cars along.'

Mr. Mompesson, who then held the living of Eyam, was about twenty-eight years of age,—his wife about a year younger; they had two children, a son and a daughter, both of necessity very young. On the breaking out of the disorder, Mrs. Mompesson with her babes in her arms earnestly solicited

her husband to fly with them from the devoted spot. Her intreaties were in vain;—he had determined never to desert his flock. In his turn he became the suppliant, and besought his wife to retire from Eyam with the children till the visitation had passed over. She would not abandon her husband. They finally resolved to abide together the danger of the dispensation, but to send off their infants to a place of apparently greater safety. Their family disposed of, they found themselves more at liberty to attend to their afflicted parishioners, and this devoted pair became the ministering angels of the village. Friends and relatives might abandon the plague-marked victims, but the pastor and his wife never forsook the patient, or hesitated to enter an infected dwelling. The dying were comforted, and the living counselled as to the best manner of preventing the spreading of the contagion; and such was the influence of this good man, that his parishioners regarded his directions almost as the behests of Heaven, and gave themselves up unconditionally to his guidance.

Considering that this frightful scourge was isolated in this mountain tract, Mr. Mompesson thought that if he could cut off all communication with the surrounding country, there was a probability that it would then in a little time completely die away. He therefore prevailed on his flock to remain at home, and assisted by the Earl of Devonshire, who also remained at Chatsworth, his princely seat, at the distance of six or seven miles from Eyam, he drew an imaginary cordon round the village, beyond which egress or regress was not allowed. In this boundary at various places were stations appointed for the inhabitants of other towns to bring the necessaries of subsistence, leaving them upon a stone, without any person being near, and returning for the value, which was found deposited in the same place, in a trough of clean spring water. Some of these troughs are still remaining, and are pointed out to strangers by the older inhabitants of Eyam.

To prevent as much as possible the effects of contagion, Mr. Mompesson closed the church, and retiring to Cucklett-dale, a dell at a little distance from the town, bounded on one side by craggy rocks, and on the other overhung by trees as planted by the hand of nature, he placed himself in a natural arch at a great height above the level, and thence, as from a pulpit, addressed his congregation, and performed the accustomed service. The narrow gloomy dell, the babbling stream which ran along its bottom, the overhanging rocks, the perforated rock since named Cucklett Church, the graceful trees, and its complete freedom from every interruption, would render this place at the present day one of the most fascinating of confined landscapes; but when we fancy in our minds the assembled villagers seated on the rising ground on one side the brook, at a distance from one another, as if each feared contagion from his neighbour, but all anxiously intent on catching every word of the preacher on the rock, and bending in solemn prayer before that Being who can alone afford them comfort and protection, we feel ourselves carried back to the scene of 1666, and are especially lost in admiration of the holy pastor who could thus direct to one great end the jarring passions and the afflictions of our nature.

For seven months did this pious man watch over the interests of Eyam, for so long did the pestilence continue its ravages. He retained his health. Mrs. Mompesson, as a precaution, prevailed on him to have an incision made in his leg, which, by being kept open, might, in case of infection, carry off the complaint. She saw one day, on examination, that her precaution had been useful, and that, from the appearance of the wound, Mr. Mompesson had escaped the danger; but the plague had entered their dwelling; and this devoted wife, while rejoicing at her husband's safety, fell a

victim to its fury. She was buried in the churchyard, where her tombstone yet remains. The feelings of her husband on this melancholy occasion are deeply expressed in a letter to his patron, Sir George Saville, and another to his children, which letters are still preserved.

Mr. Mompesson had the pleasure of seeing the extinction of the disease in the village of which he was the pastor; for by his measures its contagion was confined, and finally destroyed, as Eyam appears to have been the last place visited by this dreadful calamity. His conduct procured him the approbation of all, and he had soon after bestowed upon him the rectory of Eakring, in Nottinghamshire; was made a prebendary of York and Southwall, and had an offer of the deanery of Lincoln; this he declined in favour of his friend Dr. Fuller. He married for his second wife Mrs. Nuby, relict of Charles Nuby, Esq., who bore him two daughters, and died at Eakring the 7th of March, 1708, in the 70th year of his age, where a brass plate records his memory.

So great was the mortality during this visitation, that graves were dug, and cemeteries formed on the hills on every side of the town; these burying places are now almost entirely destroyed. One yet remains to the eastward of Eyam, known by the name of Riley Grave Stones, but not as it originally appeared. One family alone seems to have been buried there, and the dates of their deaths are a powerful record of the strength of the pestilence in this remote situation.

"I know not," says the author of 'Peak Scenery,' "that I ever felt more seriously and solemnly impressed than on my visit to this place. The dreadful power of that disease, which, while it prevailed in London, appalled the whole empire, and in the following year unpeopled the village of Eyam, is here strikingly exemplified. Six headstones and one tabular monumental stone yet remain to tell the tale of the total extinction of a whole family, with the exception of one boy, in the short space of eight days. The inscription, though much worn, may still be distinctly traced. The respective dates are,

Elizabeth Hancock, died August 3, 1666.		
John Hancock, Sen.	"	4, "
John Hancock, Jun.	"	7, "
Oner Hancock	"	7, "
William Hancock	"	7, "
Alice Hancock	"	9, "
Anne Hancock	"	10, "

"What a mournful memorial of domestic calamity do these few stones and their inscriptions present! On the four sides of the tomb which contains the ashes of the father of this unhappy family of sufferers are the words, '*Horam Nescitis, Orate, Vigilate.*'"

A descendant of the boy mentioned above, whose preservation may almost be considered as miraculous, introduced about the middle of the last century into Sheffield the method of plating ingots of copper with silver, and thus laid the foundation of one of the most lucrative manufactures of that town and its rival Birmingham.

ALFRED—BRUCE—WASHINGTON. No. II.

WE shall in this and another notice, or perhaps two more, endeavour to point out, in a short narrative, what each of these illustrious deliverers singly did in the hour of greatest peril for his country.

When the English crown, by the death of Ethelred, the last of his three elder brothers, fell, in the year 872, to the inheritance of Alfred, then only twenty-three years of age, it was scarcely worth the wearing. He was a king, but almost without a kingdom. The place to which he had succeeded called him, not to power and enjoyment, but to difficult and dangerous duties, to

severe toils, to sharp trials, to anxious responsibility. Forty-five years before, his grandfather, the able Egbert, had for the first time united all England into one sovereignty, and taken to himself the title of King of the Anglo-Saxons. Even during the reign of this great prince, the dominions, within which he had put down all native power but his own, were attacked by those daring sea-rovers from the north, whom our historians have commonly called the Danes, but who are to be considered as having been in fact a mixture of the various Scandinavian nations, including not only the Danes, but also the Swedes and Norwegians. These invaders—the same who in this century also repeatedly assailed the coasts, and even penetrated into the heart of France, where they were known under the more correctly descriptive name of the Normans, and who in the next obtained a settlement and a large territory in that kingdom—had made their first appearance in England in the year 789, at Portland, in Wessex, during the reign of Brithric, Egbert's immediate predecessor in that sovereignty. They did not return till the year 832, when, in a sudden descent, they plundered and laid waste the Isle of Shepey, at the mouth of the Thames. By far their most formidable attack, however, was made the following year, when, presenting themselves off the coast of Dorset in thirty-five vessels, they seemed to threaten the conquest and occupation of that part of the country. And in this they had nearly succeeded; for having landed at Charmouth, they not only devastated all the surrounding district, but even completely beat and put to flight a considerable force which Egbert sent against them. Still, deeming themselves not strong enough to maintain their footing, they, after a short time, returned to their ships; and when they came again, two years after, and put on shore in Cornwall, where they were joined by many of the natives, Egbert, being now better prepared for them, went to meet them in person, and defeated them with great slaughter. After this they were seen no more during his reign. But from the time that his son Ethelwolf, Alfred's father, an indolent and unwarlike prince, came to the throne in 838, they renewed their visits, and, landing almost every year at one point of the coast or another, kept the whole kingdom in a state of constant alarm. "The inhabitants of one county," as Hume observes, "dared not to give assistance to those of another, lest their own family and property should in the meantime be exposed by their absence to the fury of these barbarous ravagers. All orders of men were involved in this ruin; and the priests and monks, who had been commonly spared in the domestic quarrels of the Heptarchy, were the chief objects on which the Danish idolaters exercised their rage and animosity. Every season of the year was dangerous; and no man could esteem himself a moment in safety because of the present absence of the enemy." At last, in 851, they for the first time remained all the winter in the country, fixing their quarters in the Isle of Thanet, from which, issuing forth, they burnt the cities of London and Canterbury, and spread devastation over other parts of the country. The reigns of Ethelwolf's three eldest sons, Ethelbald, Ethelbert, and Ethelred, witnessed only a continuation and increase of the same calamities. All this time an incessant war was kept up with the foreign invaders for the possession of the country. In the concluding year of his reign, Ethelred is said to have fought no less than nine battles with his enemy, in the last of which the heroic but unfortunate monarch lost his life. The greater part of his kingdom he had already lost; for the Danes had by this time actually made themselves masters of a large portion of the north and east of England, and Ethelred's final desperate efforts had been directed merely to preserve from them his old hereditary dominions of Wessex.

Alfred, young as he was, had fought by his brother's side throughout this terrible contest, commanding as general-in-chief in many of the engagements. Having become king, he continued the struggle as long as he was able to maintain an army; and many more bloody battles took place, in some of which the Danes were defeated by the English monarch with great slaughter. But, continually strengthened by reinforcements of their countrymen, the foreigners upon the whole continued to gain ground. At length in the year 878 they succeeded in overrunning and occupying nearly the whole of Wessex, comprehending the modern counties of Hants, Wilts, Oxford, Bucks, Gloucester, and part of Somerset. The last ensign of English independence was now struck down; and Alfred, the defender and sole hope of his country, was himself obliged to provide for his safety for the present by flight and concealment. Having disguised himself, he is said to have taken refuge at first with one of his cowherds, whose wife,—if we may give credit to the famous story, which every reader will remember, of his being left by her one day to take charge of some cakes she had put to the fire, and having been rated by the good woman for allowing them to burn while he was busying himself in repairing his bow and arrows,—seems to have treated him as a kind of menial.

Such, then, was the depth of depression to which England was at this crisis reduced. Everything was in the hands of a foreign enemy; the spirit of the people was quite broken; all resistance or thought of resistance was at an end; it was a complete conquest; the invaders were wholly masters of the country. Alfred, so far from having even the poorest remnant of an army, had not even a follower left.

Yet his heroic heart did not despair. It was very early in the year that the invaders had thus carried everything before them. By Easter Alfred had again collected a few of his adherents, and had posted himself on what was then the island of Athelney, a small piece of dry ground which rose in the midst of the now drained marshes formed by the waters of the Tone and the Parrot, in Somersetshire. Here was once more a rallying-point established for the scattered friends of their king and their country. Alfred's little band, accordingly, gradually received accessions of strength. For some time he contented himself with annoying the enemy by making occasional sallies from his stronghold. Meanwhile, his friends in other parts of the country, with whom he could now hold communication, were not inactive in the same irregular warfare. At last, about Whitsuntide, he boldly ventured to come forth for a decisive trial of strength with his powerful enemy. Having shown himself at a place called Egbertstane, at the head of his troops, he was received with enthusiasm by the people of that district. From this place he marched forthwith by night to where the principal part of the Danish troops lay, near the town of Eddington, in Wiltshire; and here giving them battle, obtained a complete victory, which at once reinstated him on his throne, and re-established the national independence. The invaders were driven from Wessex, and reduced to subjection throughout England.

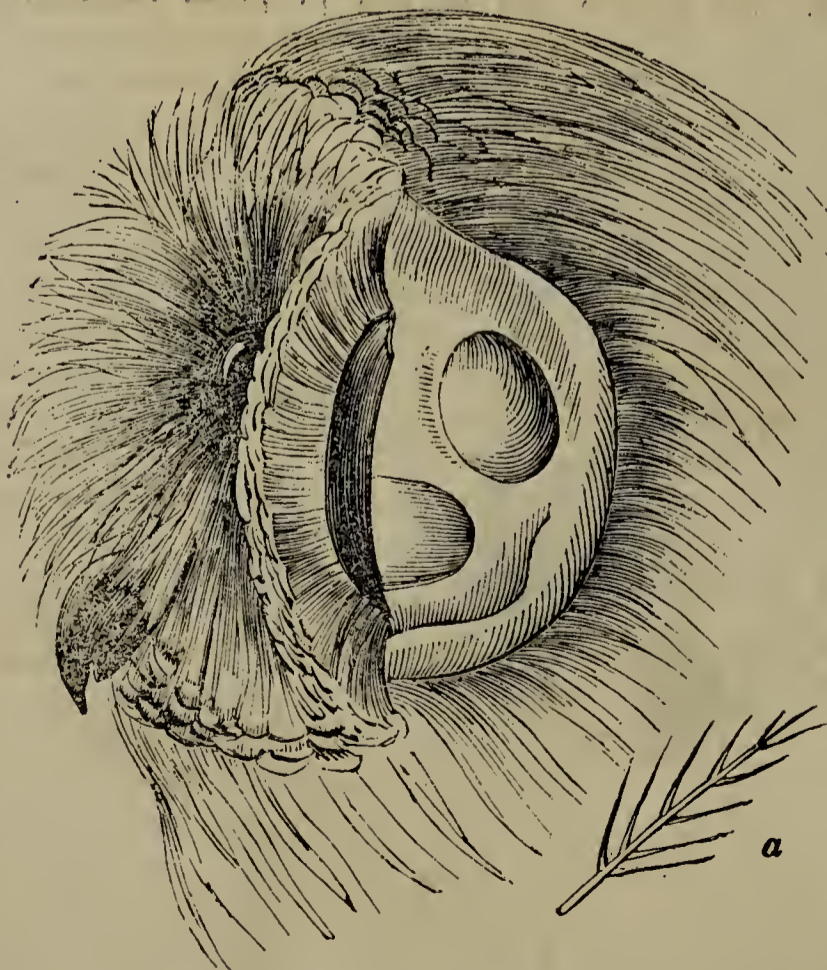
Alfred, however, knew too well the daring character of his enemies to take it for granted that he had rid himself of them for ever by this single blow. He appears to have employed the period of tranquillity he had now secured—the first the country had enjoyed for many years—in actively providing the means of defence against future attacks. Before the events we have related, he had tried the novel and bold experiment of endeavouring to oppose the Danes on what was more peculiarly their own element—the sea. The navy which he equipped was the first England had

ever possessed; so that to this admirable prince, along with many other benefits, we owe our first gift of that power which was destined to become eventually the right arm of the national strength. The trial which Alfred had made of the efficiency of his new force, although it had been unable to save the kingdom in the failure of his military operations on land, was such as to satisfy him of its value, and its adaptation to the country and the people. He now therefore set himself without delay to get ready another fleet. The language of the contemporary authorities would seem to imply that in building his ships he introduced some improvements till then unknown in naval architecture. It is certain, at any rate, that his navy was now found a match for whatever opposed it. The Danes repeatedly renewed their attacks after this in the course of his reign; but, however formidable the force in which they appeared, the excellent state of defence in which he kept the kingdom, and the activity and ability which he showed in the field, always drove them home again before they had done much damage. He survived till the year 901, and had his life been longer spared, it is probable that the whole of the remainder of it would have passed, as did the two or three years before his death, without either a domestic or a foreign enemy daring to molest him.

But Alfred did much more for his country than effect its liberation from a foreign yoke. Here, however, we cannot enter upon his admirable labours as the legislator and civilizer of the people he had rescued from bondage. He well earned for himself the epithet of Great which has descended with his name; for he is not only one of the greatest princes that figure in history, but, in every point of view in which he can be regarded, one of the brightest characters that have adorned human nature.

THE EAR OF THE OWL.

UNDER the outer edge of the ring of feathers which surrounds the eye of an owl, is a sort of valve of skin, which the owl can raise or depress at pleasure. Beneath this valve of skin is the ear, which in shape bears some resemblance to the human ear. The bird has the power of raising the valve as much as is represented in the cut, which is of the natural size. This cut is taken from an original drawing of the ear of a brown owl made by the late H. J. Shrapnell, Esq., who was for many years surgeon of the South Gloucester Militia.



[Ear of the Owl.]

a. Feather of the bill, magnified.

Food of the Anglo-Saxons.—In the dialogues composed by Elfric to instruct the Anglo-Saxon youths in the Latin language, which are yet preserved to us, we have some curious information concerning the manners and trades of our ancestors. In one colloquy the fisherman is asked, ‘What gettest thou by thine art?’ ‘Big loaves, clothing, and money.’—‘How do you take them?’ ‘I ascend my ship, and cast my net into the river; I also throw in a hook, a bait, and a rod.’—‘Suppose the fishes are unclean?’ ‘I throw the unclean out, and take the clean for food.’—‘Where do you sell your fish?’ ‘In the city.’—‘Who buys them?’ ‘The citizens; I cannot take so many as I can sell.’—‘What fishes do you take?’ ‘Eels, haddocks, minnows, and eel-pouts, skate, and lampreys, and whatever swims in the river.’—‘Why do you not fish in the sea?’ ‘Sometimes I do; but rarely, because a great ship is necessary there.’—‘What do you take in the sea?’ ‘Herrings and salmons, porpoises, sturgeons, oysters, and crabs, muscles, winkles, cockles, flounders, plaice, lobsters, and such like.’—‘Can you take a whale?’ ‘No, it is dangerous to take a whale; it is safer for me to go to the river with my ship than to go with many ships to hunt whales.’—‘Why?’ ‘Because it is more pleasant to me to take fish which I can kill with one blow; yet many take whales without danger, and then they get a great price, but I dare not, from the fearfulness of my mind.’ This extract shows the uniformity of human taste on the main articles of food. Fish was such a favourite diet, that the supply never equalled the demand, and the same fishes were then in request which we select, though our taste has declined for the porpoises. The porpoise is mentioned in a convention between an archbishop and the clergy at Bath, which enumerates six of them under the name of mere-swine, or the sea-swine, and 30,000 herrings. * * * It is an article in the ‘Penitential’ of Egbert, that fish may be bought though dead. The same treatise allows herrings to be eaten, and states, that when boiled they are salutary in fever and diarrhoea, and that their gall, mixed with pepper, is good for a sore mouth! Horse-flesh, which our delicacy rejects with aversion, appears to have been used, though it became unfashionable as their civilization advanced. The ‘Penitential’ says, ‘Horse-flesh is not prohibited, though many families will not buy it.’ But in the council held in 785, in Northumbria, before Alfwold, and in Mercia, before Offa, it was discountenanced. ‘Many among you eat horses, which is not done by any Christians in the East. Avoid this.’ But though animal food was in much use among our ancestors, it was, as it is with us, and perhaps will be in every country in which agriculture has become habitual, and population much increased, rather the food of the wealthier part of the community than of the lower orders. That it could not be afforded by all is clear, from the incident of a king and queen visiting a monastery, and enquiring, when they saw the boys eating only bread, if they were allowed nothing else. The answer returned was, that the scanty means of the society could afford no better. The queen then petitioned the king to enable them to provide additional food. They had wheat and barley in general use, but their prices were different; wheat, like meat, was a dearer article, and therefore less universal. It is said of the abbey of St. Edmund, that the young monks eat barley-bread, because the income of the establishment would not admit of their feeding twice or thrice a-day on wheaten bread. Their corn was thrashed with a flail like our own, and ground by the simple mechanism of mills, of which great numbers are particularized in the ‘Doomsday Survey.’ In their most ancient law, we read of a king’s grinding-servant; but both water-mills and wind-mills occur very frequently in their conveyances after that time. They used warm bread. The life of St. Neot states, that the peasant’s wife placed on her oven ‘the loaves which some call loudas.’ In the agreement of one of their social gilds, a broad loaf well besewon and well gesyffed is noticed. In one grant of land we find six hundred loaves reserved as a rent, and oftentimes cheeses. They were allowed to use milk, cheese, and eggs, on their fast-days.—From Turner’s *History of the Anglo-Saxons*.

* * * The Office of the Society for the Diffusion of Useful Knowledge is at 59, Lincoln’s Inn Fields.

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THE CHIMPANZÉE.



[Chimpanzée.]

THE arrival of a healthy young chimpanzée at the gardens of the Zoological Society has afforded us the gratification of contemplating the habits and actions of this animal, the rarity of which in our country adds greatly to the interest. With respect to bodily conformation, as well as intellectual faculties, the chimpanzée ranks in a higher class than the orang-outang; it advances some degrees beyond that animal, whose instincts and organic conformation are such as to render it in all its habits exclusively arboreal. In saying this, we at the same time accord to the orang a far greater

share of intelligence than what obtains among the lower groups of the *simiadae*.

The orang-outang is a native of Sumatra, Borneo, and others of the Indian Islands, the chimpanzée is a native of the western coast of Africa; both are inter-tropical animals, and live in the secluded depths of the mighty forests which spread over their respective regions. To the former must be given as synonyms, the names of red orang and pongo; for at different periods of its growth it has been described under these names by different writers; to the latter the names of black orang,

pigmy, and jocko. It is also the *satyre* of Tulpius. The jocko of Buffon is the young animal; his figure is incorrect in the extreme.

These two extraordinary animals, the largest of the *simiadæ*, although they resemble each other in certain points, widely differ in many important details connected with their organic conformation. With regard to their *osteology*, an admirable paper by Mr. Owen has appeared in the 4th part of the 1st vol. of the 'Transactions of the Zoological Society,' in which the author gives the results of a rigid examination of their respective skeletons, both as relating to the skeleton as a whole, and also to the separate bones of which it consists. Without entering, however, upon this ground, which would be foreign to our present object, we may observe that the orang-outang is more organized as a climbing animal than the chimpanzée; and it is therefore more essentially arboreal in its habits, while at the same time its adaptation for an upright position, or for progression on the ground or any level surface, is diminished in a proportional ratio. If we survey the limbs of the orang-outang, we find the inferior extremities very short, and bowed inwards, so as to allow of little more than the outer edge of the foot being fairly applied to the ground; while there is not only a want of development in the peculiar muscles which enable the human subject to walk and move with ease and vigour; but the ligament which binds the head of the thigh-bone to the bottom of the socket is altogether wanting—an arrangement which diminishes the firmness of the joint, while at the same time it adds most considerably to its freedom and flexibility. Thus the short, ill-turned, and loosely-jointed limbs of the orang, render its movements on the ground as awkward and constrained as can be well imagined; nor indeed could the animal get along at all were it not for the assistance derived from the arms,—these are of enormous power and length,—they actually touch the ground, and serve the orang as crutches; for resting his weight on the knuckles, he swings or drags his body along, the hinder extremities performing only a secondary part in the effort at progression. The ground is not the true habitation of the orang, the forest is its abode, and among the trees its activity is extraordinary; there its long arms and hook-like hands and feet, its obliquely-fixed and flexible hinder limbs, and the strength of its thick-set broad shoulders, give it an immense advantage. Now if we turn to the chimpanzée, though we find it also organized for arboreal habits, still it is not so exclusively adapted for them as the orang. In the first place its lower limbs are larger in proportion, and though their tournure is obliquely inwards, the palm of the feet, or hinder hands, is capable of being applied fairly to the ground, and the hip-joint is secured by the internal ligament as in man. The arms, though long, reach only a little way below the knee, and both the hands and feet are broad, short, and have less of that hook-like character which is so remarkable in the orang. The thumb of the hand it is true has not the same relative degree of development as in man, otherwise this organ has much of the contour of the human hand in its outline and appearance; whereas, on the contrary, the thumb of the foot is of considerable length, while in the orang it is very short, and indeed almost rudimentary. So far, then, as it regards external characters, the chimpanzée differs materially from the orang. As regards the skull of the two animals, the distinction is quite as palpable. In the orang, at least when adult, (for while immature the skull differs exceedingly from what it is in the full-grown animal) a ridge beginning above each orbit, at the angle of the temporal bone, and passing obliquely upwards, meets on the top where the frontal bone joins the parietal bones, and forms a bold, strong keel,

(as in the hyæna) which runs along the union of the two parietal bones together, and gives off, on arriving at the junction of these bones with the occipital, a continuation of itself in the form of two bold ridges, each of which sweeps obliquely downwards and forwards to the orifice of the ears in the petrous portion of the temporal bone. The strength and elevation of this interparietal crest, and of its occipital branches, indicate the development of the great temporal muscles which act on the enormous lower jaw, as well as of those of the back of the neck attached to the posterior part of the skull, and whose office it is to support the weight of the head and prevent it from falling forwards. The teeth are very large, especially the canines, which are furrowed with a series of narrow grooves from the base to the point. In the chimpanzée there is no ridge along the skull, which is small and of an oval figure, with a marked supraciliary projection. The lower jaw is less expanded, and the teeth are smaller; though in their character and in the furrows of the canines they are similar to those of the orang. The facial angle in the adult chimpanzée is 35° , in the adult orang 30° . In other parts of the skeleton also, as marked a series of differences may be followed out as those we have touched upon.

To revert to external characters, we may observe that in the orang the ears are small and lie flat on the skull, while in the chimpanzée they are large, expanded, and stand out. In both there is a similarity in the expression of the face, which has a grave and even melancholy cast of expression, more striking in the Indian than the African species. In both the hair is long, thin, and coarse, and on the fore-arms it is retroverted towards the elbow. In the chimpanzée it is black, in the adult orang red, but in the very young orang it is of dull black also. The stature of the full-grown chimpanzée, when standing upright, is about four feet; that of the orang four feet four or five inches. Such, then, is a summary of the most obvious differences which characterize these two species; and having alluded to them by way of a preface, we will at once introduce to our readers the specimen now creating so much interest in the scientific world.

The capture of this chimpanzée, which was effected by shooting its mother, who was nursing it in her arms, occurred about 120 miles in the interior from Grand Bassan, on the south-west coast of Africa, to which place, on being secured, it was brought, and thence shipped to Bristol, where, after a residence of a few weeks, it was purchased by the Zoological Society, who had it immediately conveyed to their Gardens. On entering the room in which it is kept, the first thing that struck us was its aged appearance, and its resemblance to an old, bent, diminutive negro. This appearance of age is much increased by a spare beard of short white hairs, which is spread over the muzzle, and by the deep wrinkles which furrow the cheeks. It is not until being informed of its age, which, as proved by its dentition, is about eighteen or twenty months, that a person ignorant of the natural history of the chimpanzée would consider this specimen in the light of an infant; its actions however are those of an infant capable of running about and amusing itself;—lively and playful, yet neither mischievous nor petulant, it is alive to everything which takes place about it, and examines every object within its reach with an air so considerate and thoughtful as to create a smile on the face of the gravest spectator. In its cage or den, to which it is occasionally restricted, is a swing, upon which it delights to exercise, throwing itself into a variety of attitudes, which at once bespeak its security and its perfect fitness for the waving branches of the forest. Sometimes it will stand in the swing grasping the rope by its hind-feet, and holding by one hand,—

then it will swing suspended by one foot or hand, or throw itself over the rope in an easy and frolicsome summerset. When tired with this play, it will roll about the floor, or climb the bars, or run hobbling about, which it does very quickly, generally assisting itself by resting the knuckles of the two first fingers of the hand on the ground, to do which it stoops its shoulders a little forwards;—it can, however, and does frequently, walk perfectly upright. Its pace is a sort of waddle, and not performed, as in man, by a series of steps, in which the ankle-joint is brought into play at each successive step, the heel being elevated, and the body resting on the toes;—on the contrary, the foot is raised at once and set down at once, in a thoroughly plantigrade manner, as in stamping; which, by-the-by, is an action it often exhibits, first with one foot and then with the other, sometimes alternately, at other times with one only. It is curious to observe how firmly it grasps with its hind-feet, which are broad and strong; and how easily, while thus resting on the back of a chair or on a perch, it can throw itself completely backwards, and raise itself again into its previous position,—a feat indicating great bodily power. This, indeed, it evidently possesses; for its frame is thick-set and broad, but the abdomen, as in the orang, is protuberant. With its keepers it is on the most familiar terms, and will play with them like a child, now running round them,—now dodging them,—now climbing up them and throwing its arms round their necks;—in fact, it is treated like a child, and has its face and hands regularly washed, during which ordeal it comports itself with great order and gravity. Laughter is said to be peculiar to our race, and certainly, if this animal be not an exception to the rule, in none does the face thus display the emotions of pleasure or mirth. We have however more than once observed with surprise, that when at play with its attendants, and tickled smartly, its countenance exhibited what most would call a decided laugh;—its eyes twinkled, the angles of the half-open mouth were drawn upwards, and the teeth displayed, while at the same time it uttered a chuckling noise, sounding like that of a smothered laugh. If this be laughter it is not laughter from mental emotion,—not from mirth or pleasure of mind created by the imagination alone,—for here man is isolated in the animal creation,—but from agreeable bodily sensations,—from the sympathies of the nerves of the frame acted on by *external causes*. If however it be not conceded to be laughter, then will it be the nearest approach to laughter which any animal below man can exhibit.

The propensity of this animal to put everything into its mouth is very remarkable. On being presented with a tin rattle, it took no notice of the noise of the instrument made by shaking it, but at once tried to crush it between its teeth. After carrying it about, it would abandon it, take up something else, leave that, and return to it again. It is however always very anxious to obtain what is out of its reach, which, when obtained and examined, is soon neglected. From the gentleness of its disposition, it is not easily put out of temper; but when this is the case, as occasionally happens, it evinces its displeasure by a hoarse guttural sound, and by protruding the lips, while it looks intently, and with an expression of anger, at the offender. This expression is rendered more marked by the vivacity of the eyes, which, though small and deeply set, are quick and penetrating: their colour is dark hazel. In the various antics and sportful play of this lively little chimpanzée there is nothing of that *brusquerie* and that restless quickness which are so observable in the actions of the monkey;—nothing of that chattering and grinning on every surprise;—and it is in these minutiae that we recognise its superiority, and the approxima-

tion, however distant, of its manners to those of the young of our own race.

Farinaceous food, fruit, cooked meat, milk, &c., constitute the diet upon which this interesting little chimpanzée is fed. It is also fond of tea, but refuses beer and fermented liquors. It is certainly amusing to see the creature take a cup of milk or tea in its hand, and, in imitation of our actions, gravely sip the contents, and set down the cup with due propriety. In drinking, however, we observed that the lips, which are extremely mobile, are always protruded; the animal can in fact insert them into a cup of fluid and thus suck it up. We have witnessed him apply his protruded lips to the orifice which had been bored through the shell into a cocoa-nut and thus suck out the milk, holding up the fruit with both hands, which, after the juice was drained, he quietly laid down. We have seen him receive a cake with an air of gentleness and a manner so different from that of monkeys in general, as to be quite remarkable, nor less so was his deliberate mode of eating it.

Like most animals in a reclaimed state, the chimpanzée has his favourites,—among these are the cook (for he is at present in the kitchen where the meals of the keepers are dressed,) and the person appointed to take immediate charge of him. On their approach he testifies the most unequivocal signs of pleasure; he recognises even their footsteps, and watches for them with evident impatience. The moment he sees them he pouts his lips, utters a low sound of satisfaction, and, if at liberty, at once makes towards them, climbs upon them, and commences a fondling sportful play. The cook indeed sometimes finds the little creature's attachment troublesome, for she finds it difficult to disengage herself from him; and, if not prevented, he will go about the place with her, holding by her gown like a child. On one occasion he opened the lattice-window of the kitchen, and was seen looking very composedly about him, as if in admiration of the novelties offered to his view. On the supposition, however, that he might escape into the garden, and not be induced, without some difficulty, to return, he was ordered to come away (for though he cannot understand the words, he feels the force of a command from the tone in which it is uttered), and he not only obeyed but closed the window, and descended to his attendant.

The monkey tribes have, as is well known, an instinctive fear of the larger kinds of snakes, to which they often fall a prey: it was considered worth the trial to ascertain whether, in an animal so young, and which most probably had never seen a formidable snake, this feeling was fairly displayed. Accordingly a large snake was showed to him, on seeing which the chimpanzée was at once filled with terror, and hid itself in a corner. The lid of the basket into which the snake was put was then closed, and an apple placed upon it; and though the animal desired the fruit, it would not venture near the lurking-place of its dreaded foe, but by actions and gestures, too plain to be misunderstood, expressed its consternation;—nothing, in fact, would induce it to approach the basket. This, with the snake, was at length removed, and the apple was placed upon a chair; then, after a most cautious and keen scrutiny, with many doubts and misgivings, the timid creature at length ventured to take the offered prize. From this experiment it is plain that the snake is dreaded instinctively even by the largest of the simiadæ;—yet this young chimpanzée has no fear of a dog. In the same room is a Maltese or hairless female dog, with a litter of young ones; and, notwithstanding the snarling and barking of their mother, he will intrude upon her kennel, take up the puppies one by one, gravely look at them, and replace them with the utmost gentleness. When wearied with its exertions, the chim-

panzée retires to its bed of blankets in a corner of the cage, and there, covering itself up, it usually crosses its arms over the chest, buries the face upon them, and thus settles to sleep.

Dressed in the Guernsey jacket and cap in which he came over to England, the odd appearance and the almost human demeanour of the animal elicit the surprise of visitors. Most, however, admire his gentleness and air of intelligence. Whether as he grows older this intelligence and docility will remain is a question that remains to be tried. It is observed that the most playful and gentle of the apes and monkeys lose, on arriving at maturity, all that previously rendered them entertaining, and degenerate into sullen, irascible, and malicious brutes. The temper, disposition, and intellect of the adult chimpanzée are yet to be ascertained; for, as far as is known, neither an adult chimpanzée nor orang have ever been in a state of captivity. We trust that the present animal will live long enough to enable the scientific world to form a correct and thorough estimate of its capabilities, manners, and instincts.

CHINA.—No. XI.

SUNDRY VEGETABLE PRODUCTS.

THE *arachis hypogea* or ground-nut, which, though found in other parts of Asia and in Africa, was probably introduced from China, where it is much cultivated in fields, like our potatoes, forms an important article of food. It is eaten both as a fruit and a vegetable, and its seeds are made to render oil.

Besides gourds and cucumbers of different species, kidney beans, capsicums, and other things common to us, the Chinese have their famous *petsai*, which is a peculiar kind of cabbage. This is indeed essentially a national plant. "The quantity consumed," says Mr. Clarke Abel, "all over the Chinese empire, but in Peking especially, is immense; the nine gates of this city, according to some authors, being frequently choked by various vehicles laden with it, which pass through them daily from morning till night during the months of October and November. This vegetable may in fact be considered in relation to the Chinese what the potatoe is to the Irish. It is prized by all classes, and esteemed by them as a necessary of life. It is cultivated all over the empire, and receives a greater share of horticultural labour and skill than any other plant. In rearing it the Chinese consume an enormous quantity of their celebrated manure, called by them *Ta Few*, composed chiefly of human ordure. This plant, which I have eaten as a salad, and found equal to any lettuce, has somewhat the flavour, when boiled, of asparagus. It often weighs from fifteen to twenty pounds, and reaches the height of two or three feet. The Chinese preserve it during the winter by different methods; many pickle it in salt and vinegar, others keep it fresh, either by planting it in large quantities in wet sand, at the bottom of trenches cut for the purpose, or after drying it in the sun, by burying it deep in the earth. Those who wish to preserve it for a short time only, place it two or three feet beneath the surface, covering it with a layer of straw and earth."

In the northern provinces of the empire the Chinese cultivate on an extensive scale the *xing-ma* or *sida tiliæfolia* and the *gě ma* or *cannabis sativa*, not as articles of food, but for the manufacture of cordage, which is formed of their fibres. With the usual intelligence of these people in detecting every useful quality of all the productions of nature, they have discovered a medicinal property in the root of the *sida*, which they use as a powerful sudorific.

The castor-oil plant, or *ricinus communis*, valued by us solely as a medicine, is extensively cultivated by

the Chinese as an article of food. They have ingeniously discovered some method of depriving the oil produced from the seeds of this plant of its purgative properties and nauseous taste to such a degree that they use it in their dishes*. They also eat the seeds after the oil has been extracted from them.

The kinds of corn most cultivated in China, seem to be several species of millet and buck-wheat; but rice, and not corn-bread, is the staff of life of the Chinese.

"Wheat," says Marco Polo, "does not yield so good a crop as rice; and bread not being in use among them, wheat is eaten only in the form of vermicelli or of pastry." This fact is confirmed in all its points by the missionaries, by Mr. Barrow, and all our modern travellers. "A stronger proof of the old traveller's fidelity," adds Marco Polo's learned editor and commentator, Mr. Marsden, "cannot be required than is afforded by the minute agreement of these observations on the use made of certain grains as articles of food."

THE CASTLE OF CHILLON.

THE Castle of Chillon is an object of prominent interest on the north-eastern shores of the lake of Geneva. It is about a mile and a half from the village of Clarens, midway between it and Villeneuve, at the eastern extremity of the lake, near the mouths of the Rhone. Opposite the castle, on the southern side, are the heights of Meillerie, which, though they shut out from view the Alps of Savoy, compensate for this by their own beauty. The lake is here seven miles wide, and of great depth. A torrent rushes down from the heights behind the castle, and the character of the scenery is that of grandeur and wildness rather than that soft Italianized beauty described by Rousseau in his 'Nouvelle Heloise.' But some licence may be allowed to poets and romancers; and Clarens, which is described by Simond in his 'Journal in Switzerland,' as "a dirty village, less prettily situated than any in the neighbourhood," was chosen by Rousseau, according to the same writer, for no other reason than that its name is a better sounding one than that of other villages which surround it. Helen Maria Williams, who travelled over the scene of Rousseau's tale about forty years ago, saw Clarens with more romantic eyes than M. Simond, and describes it as "embosomed in trees at the foot of a mountain."

The castle of Chillon is built on a flat rock near the shore, from which access is obtained by a wooden bridge. Lord Byron says of the castle,—"It is large, and seen along the shore for a great distance; the walls are white." When Miss Williams visited it, it was converted into a sort of Bastille, and guarded by soldiery. All the great and little governments were at that period alarmed by the progress of revolutionary principles. The dungeons were, according to her account, pierced by the groans of incarcerated patriots, and she saw a placard issued by the alarmed authorities, prohibiting the introduction of French newspapers, and describing with great accuracy the various degrees of corporal punishment to be inflicted on individuals who should have the audacity to discuss the principles of the government under which they lived, or to read the journals in which its actions were recorded and commented upon.

This was in Switzerland, whose oppressors, 300 years

* "Its drastic qualities," says Mr. Barrow, "may probably be diminished by applying less pressure in extracting the oil, or by habit, or by using it fresh, as it does not appear that the Chinese suffer any inconvenience in its application to culinary purposes. As well as I could understand, the seeds were first bruised and then boiled in water, and the oil that floated on the surface was skimmed off. Our Florence oil they affected not to admire, having, as they said, no taste."—*Travels*, p. 546.



[Castle of Chillon, from the Lake.]

before, had been trodden down by the free and bold inhabitants, and thereby secured their political independence, though in Geneva a relentless persecution for religious opinions was instituted by themselves. The castle of Chillon was at that period a state prison. The Duke of Savoy, the oppressor of the Genevese, enclosed within its dungeons the firmest supporters of the independence of Geneva; amongst whom was François de Bonnavard. He was confined from 1530 to 1536. The Duke of Savoy was determined on stifling the Reformation, if it were possible for his armed bands to effect such an object; but his persecution and tyranny drove his victims to arms. He endeavoured to starve the Genevese into submission by intercepting their supplies, but they boldly fitted out five boats, each manned with eighty soldiers, and crossed the lake to procure provisions on his own territory. Being afterwards aided by 7000 Bernese, the Duke's position soon became desperate, and the last place which held out for him was the castle of Chillon. It was invested both by land and water, and the imprisoned Swiss heard the cannon of their victorious countrymen battering the walls which had so long confined them. Bonnavard was among the number released. He had worn a track across the rocky floor of his cell by pacing it so many weary days and nights. Lord Byron's fine 'Sonnet on Chillon' alludes to this circumstance:—

Chillon! thy prison is a holy place,
And thy sad floor an altar—for 'twas trod,
Until his very steps have left a trace
Worn, as if thy cold pavement were a sod,
By Bonnavard!—May none those marks efface!
For they appeal from tyranny to God.

Lord Byron appears to have obtained a sketch of Bonnavard's history from a citizen of the Genevese republic, and has inserted it as a note to the above poem. He has himself added that Geneva is still

proud of the memory of a man "worthy of the best age of ancient freedom." Setting aside the meaning of the very questionable term "ancient freedom," it is clear that Lord Byron was in some measure misled by the citizen of Geneva who furnished him with the materials on which he grounds his eulogy. In this notice of Bonnavard it is stated that after having rendered Geneva free, he succeeded in rendering her tolerant. As to his toleration, M. Simond relates that, very shortly after his escape from the dungeons of Chillon, he became member of a tyrannical council which proceeded to treat the opinions of those who adhered to the old faith with the utmost bigotry. Bonnavard, it is true, was somewhat in advance of others. He voted that time should be allowed for the Catholics to deliberate. The acts of the council produced many serious conflicts, but they were eventually enforced. In estimating the justice of an eulogy on Bonnavard, regard should be had to the spirit of the times in which he lived, as compared with that of the present day. The contrast will show how imperfectly the principles of rational liberty were developed at the former period, and that though he was in some respects a dauntless lover of freedom, he was in others, when compared with our own times, incapable of valuing the rights and privileges of liberty of opinion and conscience.

Lord Byron, in his note on the castle of Chillon, says,—“Within it are a range of dungeons. Across one of the vaults is a beam black with age, on which we were informed that the condemned were formerly executed. In the cellars are seven pillars, or rather eight, one being merged in the wall; in some of them are rings for the fetters and the fettered: in the pavement the steps of Bonnavard have left their trace.” M. Simond visited the castle in 1817: it was then garrisoned by a few lazy soldiers, one of whom guided him to the dungeon said to be beneath the level of the lake.

M. Simond, however, was sceptical on this latter point. He says, "Comparing the height of the loop-hole grates, *where captives weep*, (as he sarcastically remarks,) above the water's edge from the outside, and above the rocky floor inside, I remained satisfied the latter was something above the former;—particularly when I observed a hollow place full of water, which must come from the lake, and would rise above the floor of the dungeon if it really were lower than the level of the lake." The writer satirically adds,—“It grieves me to contradict poets or picturesque and sentimental travellers, but really the dungeon of Chillon is not under water; and, besides, is absolutely a comfortable sort of a dungeon enough, full forty feet long, fifteen or twenty feet wide, and fifteen feet high, with several narrow suits into the thick wall, above reach, but admitting air and light, and even some rays of sun.”

Lord Byron's touching poem, "The Prisoner of Chillon; a Fable," contains one or two descriptive allusions to the castle, which we subjoin. As the story is fictitious, so also has the poet, with a pardonable license, introduced into his picture of the castle points which do not precisely correspond with the actual edifice. With an exception, which contributes to heighten the interest, the following part of the poem, however, is in every respect an accurate sketch:—

Lake Lemán lies by Chillon's walls:
A thousand feet in depth below
Its massy waters meet and flow;
Thus much the fathom-line was sent
From Chillon's snow-white battlement,
Which round about the wave enthralls:
A double dungeon wall and wave
Have made—and like a living grave.
Below the surface of the lake
The dark vault lies wherein we lay;
We heard it ripple night and day;
Sounding o'er our heads it knock'd;
And I have felt the winter's spray
Wash through the bars when winds were high
And wanton in the happy sky;
And then the very rock hath rock'd,
And I have felt it shake, unshock'd,
Because I could have smiled to see
The death that would have set me free.

And again:—

There are seven pillars of Gothic mould
In Chillon's dungeons deep and old,
There are seven columns, massy and gray,
Dim with a dull imprison'd ray,—
A sunbeam which hath lost its way,
And through the crevice and the cleft
Of the thick wall is fallen and left;
Creeping o'er the floor so damp,
Like a marsh's meteor-lamp.

Our view is taken from an original drawing, made on the spot, in 1835, by H. T. Delamotte, Esq.

ROBERT BRUCE.

A SHORT chronological detail of the course of events during the quarter of a century which preceded the appearance of Robert Bruce on the scene of Scottish history, will place in the clearest light what that great deliverer achieved for his country.

In 1282 Scotland was in the enjoyment of profound peace, and perhaps unprecedented prosperity, under the sway of Alexander III.,—one of the ablest and best in the list of her kings. Alexander had married Margaret, a daughter of King Henry III. of England, and was, consequently, the brother-in-law of the reigning king of that country, Edward I. The Scottish king was now in the forty-second year of his age, and having a son and a daughter arrived at maturity, had a fair prospect of leaving his sceptre to a line of descendants, after a reign which might yet have been extended to a distant date. This year his daughter Margaret was

united in marriage to Eric, the young King of Norway; and, soon after, his son, of the same name with himself, to Margaret, daughter of Guy, the head of the powerful house of Flanders.

A short space sufficed to turn to darkness all this appearance of a secure and happy future. The Queen of Norway had scarcely been married a year when she died, after having given birth to a daughter. The death of Prince Alexander, without issue, followed in January, 1284; and, finally, on the 16th of March, 1286, the king himself, having fallen over a rock at Kinghorn, in Fife, while riding at night, was killed on the spot.

Thus terminated the line of the original Celtic kings of Scotland. The sovereignty of that turbulent country now devolved upon the infant Norwegian princess, who of course was still at the court of her father. Had even she survived, the calamities that fell upon the kingdom might still have been averted. The crown had been solemnly secured to her by a declaration of the Estates of Scotland, which her grandfather had taken the precaution to obtain the year before his death; and, since that event, it had been arranged that, as soon as she was brought home, she should be affianced to her second cousin, the eldest son of the English king,—a project which, if it had been carried into effect, would have eventually united the two kingdoms under one sceptre. But this hope was also doomed to be disappointed. Margaret, the young Queen of Scotland,—known in Scottish history by the name of the Maid of Norway—having, in 1289, been placed by her father in the hands of ambassadors sent to conduct her to the country of which she was to wear the crown, was taken ill on the voyage, and having been carried on shore to one of the Orkney Islands, died there.

Now came the calamity of a disputed succession to the throne,—always one of the greatest that can befall a state, but in this case aggravated by the advantage taken of the crisis by the English monarch to endeavour to make himself master, by fraud or force, of the distracted country. The contest which ensued lasted for more than twenty years; the barbarities of war, in the constant alternation of conquest and insurrection, being only interrupted for short seasons by the gloomy tranquillity of enslavement and despair. Although many competitors started in the first instance, the only two that eventually prosecuted their claims were John Baliol, Lord of Galloway, and Robert Bruce, Lord of Annandale; the former the grandson of the eldest daughter, the latter the son of the second daughter, of David Earl of Huntingdon, in whose line the right to the crown now undoubtedly resided. On the 19th of November, 1292, the English king, to whom the decision had been referred, gave judgment in favour of Baliol. On the next day, the new King of Scotland did fealty to Edward as his feudal superior; and on the 30th he was crowned at Scone. For more than three years Baliol and his subjects remained apparently quiet under the yoke which had thus been imposed upon them; but in the spring of 1296, Edward having by this time become involved in a war with France, the Scots, seeing what they thought a favourable opportunity of regaining their freedom, also rose and took arms against him;—Baliol, driven into resistance by many humiliations he had been made to suffer from his haughty liege lord, having been induced to place himself at the head of the insurrection. This effort, however, conducted with no ability, wholly failed; the generals of Edward carried everything before them, and, after a few weeks, the conquest of the country was complete. As this was considered to be the suppression of a rebellion, the sword was allowed even more than its usual license, and the victor endeavoured to

strike terror into the hearts of the miserable people by massacres and devastations on a large scale. On the 2nd of July, Baliol formally surrendered the kingdom into the hands of Edward, who immediately appointed one of his generals to govern it as his deputy.

In less than two years, however, the Scots again revolted. Their leader now was the illustrious Wallace. Under his conduct they chased the English authorities from the kingdom,—overthrew, at Cambus Kenneth, a force of 40,000 men that was despatched to put down the insurrection,—obtained possession of some of the principal fortresses,—re-established a native government,—and were not again brought under the yoke till Edward himself came against them at the head of an army of 100,000 strong, and defeated the Scottish champion at the fatal battle of Falkirk, fought on the 22nd of July, 1298.

The spring of the year 1303 was signalized by another revolt, which lasted for nearly two years, and which in like manner was not decided till the English king had again taken the field in person. Its suppression was followed by new cruelties and devastations, and by the abandonment of the unhappy country to a tyranny more grinding than ever. Among other acts of vengeance, Edward stained his character with indelible infamy by the execution of the heroic Wallace, who had been betrayed into his hands. He suffered on Tower Hill, London, on the 23rd of August, 1305.

It was now that Bruce resolved to put himself at the head of his countrymen, and to call them up to yet another struggle for their liberties and independence. He was the grandson of Robert Bruce, the competitor for the crown with Baliol, and was at this time about thirty years of age. His father and grandfather having adhered to the English interests in the late contests, or having perhaps been forcibly detained by Edward under his own eye, he had till now resided at the English court. That his detention here was compulsory appears to be proved by the stratagem to which he was obliged to resort in order to make his escape from London. He had already been concerting his plans with some connexions in Scotland, when a friend, having learned that he was watched, but not venturing to give him direct warning, sent him one day, by a servant, a pair of spurs and a purse of money. Penetrating the hint, Bruce lost not a moment. Having ordered three horses to be shod with the shoes turned backwards, in order to perplex his pursuers, he set off, accompanied by two trusty servants, in the middle of the same night. When his flight was discovered, horsemen were ordered to scour the country in all directions,—but he eluded or outrode them; and on the 10th of February, 1306, which was the seventh day after he had set out from London, he made his appearance, in the midst of his friends, at his castle of Lochmaben, in Dumfriesshire. From this he immediately proceeded to Dumfries, where, in an interview in the Dominican church with John, called the "Red Comyn,"—who, after having become a party to the enterprize, is supposed to have expressed an inclination to recede from his engagement,—he, in the heat of the dispute which arose between them, slew that nobleman with his dagger at the altar. From the manner in which the news of this deed of blood and sacrilege was received by the Scots, there is reason to think that Comyn was generally believed to have been engaged in the interest of the English king when his career was thus suddenly cut short, and to have been preparing to betray his friends and his country.

Many of Bruce's countrymen now gathered to their new leader, and having made his way to Scone without being opposed, he was crowned there on the 29th of March. A sudden reverse, however, was awaiting him. Edward now lost no time in collecting his strength,

and a powerful force, under the command of Aymer de Valence, soon arrived in the neighbourhood of the royal residence. An engagement took place on the 19th of June, at Methuen, near Perth, and ended in the total defeat and rout of the Scots. Several of Bruce's most distinguished adherents were here taken prisoners, and afterwards executed as rebels and traitors.

He himself was compelled to seek safety in flight. Having placed his wife, his two sisters, and his youngest brother Nigel in the castle of Kildrummie, in Aberdeenshire, where they soon after fell into the hands of the ruthless Edward, he himself retreated to the wilds of Breadalbane. "He was left," says Hollinshed, translating from the old Scottish chroniclers, "so desolate and unprovided of all friendship, that he was constrained for his refuge to withdraw into the woods and mountains, with a few other in his company, and there lived on herbs and roots oftentimes for want of other food." "Yet," continues the narrative, "though he was thus left desolate of all aid and succour, having his brethren and other of his friends murdered and slain, to his utter discomfort and ruin, as was then supposed, he nevertheless lived ever in hope of some better fortune, whereby in time to come he might recover the realm out of the enemy's hands, and restore the ancient liberty thereof to the former estate. As for the pains which he took in living barely for the most part by water and roots, and lodging oftentimes on the bare earth without house or other harborough, he was so accustomed thereto by haunting the wars in his youth that the same grieved him little or nothing at all. But to conclude: such was his valiancy and most excellent fortitude of mind and courage, that no injurious mischance or froward adversity could abash his invincible heart and warlike stomach."

He afterwards found it necessary to cross over from the mainland to one of the Hebrides, and eventually he took refuge in the small island of Rach-erin or Rach-rine, lying opposite to Ballycastle, on the coast of Ireland. From this he passed to the Isle of Arran; and, by the spring of 1307, he was again at the head of a considerable force in Ayrshire, and openly preparing to regain his crown. Edward now determined to march against him in person; and, having collected another great army, had advanced nearly to the Border at its head. But heaven averted from the land which had been already swept by so many similar visitations this new storm. The English king was suddenly taken ill at Carlisle, and died there on the 7th of July. This event broke up the expedition. Bruce was now left free to pursue his enterprize: assisted by his younger brother Edward and other gallant associates, he assailed and reduced one after another nearly all the strongholds in which English garrisons had been placed; and, in no long space, almost the whole of Scotland was once more his own.

Taking advantage of the indolent character of the new king of England, he even made various successful inroads into that country, and avenged by the plunder of his enemy a small part of what his subjects had again and again suffered in this protracted contest. In this state things continued for some years, without any serious attempt being made by Edward to recover his father's conquests. At last, however, in the spring of 1314, the troubles in which the commencement of the reign of that king was involved having been somewhat composed, he determined to make a grand effort to crush the rebellion for ever; and, collecting the mightiest host which England had ever yet sent forth, he marched with it into the heart of Scotland. Every reader is aware of the issue, so glorious to Bruce and to the Scottish arms. The ever-memorable battle of Bannockburn, fought on the 25th of June, scattered

Edward's proud armament like chaff before the wind, struck from Scotland the last link of her chain of bondage, relieved her from the curse of war for many years, and left the great hero of the day on a throne which so long as he lived was never again either shaken or assailed.

His reign did not close till the year 1329, when a disease, under which he had suffered during a great part of his life, at last brought him to his grave. This admirable king did not lose in peace the renown which he had gained in war; but, on the contrary, by the wisdom of his civil government, greatly heightened the fame which he had acquired over all Europe, as well as the love and honour in which he was held by his subjects at home. He was regarded in that age as in all things the model of a perfect knight; and one name only, that of the Emperor Henry of Luxemburg, was placed in the popular estimation before that of Bruce. It is related that upon one occasion, in the presence of Edward II., an English herald ventured even to defend the claim of the Scottish king to take precedence of the Emperor; "for the valiant acts," said he, "achieved by Henry may be ascribed rather to the wisdom of his counsellors than to his own valiantness and prudence; but, contrarily, King Robert, being confined out of his country, and destitute of friends and all convenient aid, recovered the realm of Scotland, by his singular manhood, out of the hands of your noble father, and established it with such tranquillity, that he appeared more terrible to his enemies of England than ever they had been afore to his subjects of Scotland." His history, as related in detail by the old chroniclers, abounds in instances of the lofty generosity of his nature, and the clemency and kindness which ever tempered and graced his valour. "The commendations of which King Robert," says Francis Boteville, in his *Additions to Holinshed*, "Buchanan setteth forth (to comprehend many things in few words) to be, that he was every way a most worthy person, and that there were few to be found, from the former heroical days, equal unto him in all kinds of virtue; for as he was in battle most valiant, so was he in peace most temperate and just. And though his undivided good success and perpetual course of victories (after that fortune was once satisfied or rather wearied with his misfortunes) were very great, yet he seemeth to Buchanan to be far more wonderful in his adverse fortune; whose valour of mind was such that it could not be broken, no, not so much as weakened, by so many evils as happened unto him at one time; whose singular constancy appeared by the captivity of his wife and the death of his valiant brethren; and, besides that, his friends were at one time vexed with all kind of calamities, and they which escaped death were banished, with the loss of their substance; he himself was not only spoiled of all his patrimony, but of his kingdom also, by the mightiest king of that age, Edward I., king of England, a man most ready in counsel, and of dispatch of his affairs as well in war as peace. Yea, so far was this Bruce oppressed at one time with all these kinds of evils, that he was driven into extreme poverty: in all which misfortunes he never doubted of the recovery of the kingdom; neither did or said anything unbecoming the noble mind of a king; for he offered no violent hands to himself, as did the later Cato and Marcus Brutus; neither with Marius did he pursue his enemies with continual hatred. For when he had recovered his former estate, he so lived with them that had most occasioned his labour and trouble, that he rather remembered himself to be a king over them and not an enemy unto them. To conclude, he did not so forsake himself towards his end (when a grievous disease added troubles to age) but that he confirmed and established the present estate of the kingdom, and provided for the

quiet of posterity, whereby his subjects did not so much lament his death as that they were deprived of so just a king and Godly father."

Hares.—The vicinity of Monza and a great part of the royal park has a bad soil. The land inclosed in the park is sown with rye, whilst that beyond the inclosure, though in other respects similarly circumstanced, is occupied by wheat. The manager (*Wirtschaftsverwalter*) told me that within the park wheat could not be sown on account of the hares, by whom it would be entirely destroyed, as they are very fond of the young wheat, but let the rye stand untouched.—*Dr. Burger's Travels through Upper Italy*, (Vienna, 1831) vol. ii., 159.

Affection of Birds.—The following instance of attachment in these birds (swans) has recently come under my observation. A pair of swans had been inseparable companions for three years, during which time they had reared three broods of cygnets: last autumn the male was killed, and since that time the female has separated herself from all society with her own species; and though at the time I am writing (the end of March) the breeding-season for swans is far advanced, she remains in the same state of seclusion, resisting the addresses of a male swan who has been making advances towards forming an acquaintance with her, either driving him away, or flying from him whenever he comes near her. How long she will continue in her present state of widowhood I know not, but at present it is quite evident that she has not forgotten her former partner. This puts me in mind of a circumstance which lately happened at Chalk Farm, near Hampton. A man, set to watch a field of peas which had been much preyed upon by pigeons, shot an old cock-pigeon who had long been an inhabitant of the farm. His mate, around whom he had for many a year cooed, and nourished from his own crop, and assisted in rearing numerous young ones, immediately settled on the ground by his side, and showed her grief in the most expressive manner. The labourer took up the dead bird and tied it to a short stake, thinking that it would frighten away the other depredators. In this situation however his partner did not forsake him, but continued, day after day, walking slowly round the stick. The kind-hearted wife of the bailiff of the farm at last heard of the circumstance and immediately went to afford what relief she could to the poor bird. She told me that, on arriving at the spot, she found the hen-bird much exhausted, and that she had made a circular beaten track round the dead pigeon, making now and then a little spring towards him. On the removal of the dead bird, the hen returned to the dove-cot.

'Like to a pair of loving turtle-doves,

'That could not live asunder day or night.'—SHAKESPEARE.

The only instance I have met with in which the hen-bird has not the chief care in hatching and bringing up the young is in the case of the emu at the farm belonging to the Zoological Society near Kingston. A pair of these birds have now five young ones: the female at different times dropped nine eggs in various places in the pen in which she was confined. These were collected in one place by the male, who rolled them gently and carefully along with his beak. He then sat upon them himself, and continued to do so with the utmost assiduity for nine weeks, during which time the female never took his place, nor was he ever observed to leave the nest. When the young were hatched he alone took charge of them, and has continued to do so ever since, the female not appearing to notice them in any way. On reading this anecdote, many persons would suppose that the female emu was not possessed of that natural affection for its young which other birds have. In order to rescue it from this supposition, I will mention that a female emu belonging to the Duke of Devonshire at Chiswick lately laid some eggs; and, as there was no male bird, she collected them together herself and sat upon them.—*Jesse's Gleanings in Natural History*.

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THE CASTOR-OIL PLANT.



[Castor-Oil Plant.]

THE castor-oil plant (*ricinus communis*) belongs to an order (*euphorbiaceæ*) whose affinities have not yet been accurately limited by botanists; but it is supposed to comprise at least 1500 species, distributed in each quarter of the globe from the equator to latitudes as high as Great Britain; "sometimes," as Professor Lindley remarks, "in the form of large trees, frequently of bushes, still more usually of diminutive weeds, and occasionally of deformed, leafless, succulent plants resembling the cacti in their port." The *ricinus communis* becomes an annual in our climate, and its stem and branches are said to lose their ligneous nature, and afterwards, on being placed in a hot-house, to re-assume their former characteristics. At Villefranche, near Nice, there were, in 1818, specimens in the open air above thirty feet high, which it was believed

were the only instances in Europe of the species growing in an arborescent form. The tropical latitudes of Asia, Africa, and America are the regions in which it is indigenous, and of course most flourishing.

The properties of the order of plants to which the *ricinus communis* belongs are remarkably varied, and highly valuable on account of their medical uses. Both Jussieu and Lindley have enumerated them in their respective systems of botany. The peculiar virtues of the plant reside principally in a milky secretion which it produces, the strength and efficacy of which are determined by the secretion being more or less copious. Some of the species exhale an aromatic odour, others a disagreeable and pungent one. The flowers of some may be used in preparing a decoction possessing useful tonic properties; in others, the leaves are sudorific;

and again, the juice and root of some of the species may be taken as an emetic. The properties of the plant range from gentle and beneficial stimulants to rank poison; the nature of the poison, however, frequently being so volatile as to be deprived of its baneful effects by the action of fire: so that the roots of some species which would be destructive of life if eaten in their natural state, become, after cooking, a nutritious food for sustaining and invigorating it. The preparation called turnsol (*croton tinctorum*) is obtained from one of the plants of this order, so named from its turning its flowers to the sun; and caoutchouc is supplied by others of this widely-diversified genus.

The *ricinus communis*, or castor-oil plant, is highly valuable for the excellent medical virtues of the oil which it furnishes: its root is said to be diuretic. The positions of the flowers are shown in the accompanying cut; but it is from the seeds that the oil is extracted, three of which, of an oblong flattish form, are inclosed in each receptacle. The oil is prepared chiefly in the East Indies, and in the West India Islands, the United States, and also in the south of Europe.

In America, the seeds being stripped of their covering, are boiled about six hours in a considerable quantity of water, and the oil, as it rises to the surface in a white and frothy state, is carefully skimmed off. Successive boilings, and straining in a canvass bag, bring it to the necessary degree of fineness and purity.

The oil which has been what is called "cold drawn" is generally held in the highest estimation. This method consists in the seeds being bruised in a mortar, in order to express the oil, the whole being afterwards tied up in linen bags, and strained until the oil separates from the bruised seeds.

A French chemist has proposed a third method of extracting the oil, founded on the circumstance of its remaining insoluble in alcohol.

The best castor-oil is of a pale straw colour, and the more limpid it is the better are its qualities. The use of castor-oil in medicine is not of very old date; but not only are its excellencies generally acknowledged, but in some respects its properties are to be found in no other medicine. It was formerly believed that the mode adopted for obtaining the oil by bruising the seeds was the means of rendering it harsh and acid; but some French chemists who made experiments both on the seed and its rind found that the quality of the oil was not injured from the cause which had been supposed; but that some mismanagement attending the preparation, and which might occur under either system, occasioned the decomposition of a small portion of the essential properties of the oil.

* In 1833 the importation of castor-oil in the United Kingdom was 343,805 lbs.; viz., 7282 from the south of Europe; 38 from the Cape of Good Hope; 316,779 from Ceylon, and the territories of the East India Company; 12 from China; 13,124 from the British North American Colonies; 1905 from the West Indies; 4665 from the foreign West India Islands. The duty previous to the year 1827 yielded about 11,000*l.* a-year; from 1827 to 1832 about 4,500*l.* a year, and in 1833 only 62*l.*; the variations being occasioned by alterations in the tariff. During the last fifteen years the duty on castor-oil has successively been 1*s.* 3*d.*, 6*d.*, and 3*d.* per lb., if imported from any of the British possessions. It is now only 2*s.* 6*d.* per cwt.

ON POTATOES.

ALTHOUGH the use of potatoes is now generally diffused among civilized nations, it is yet somewhat singular that the history of their introduction into Europe is still wrapped in mystery. We find them, indeed, men-

tioned by Shakspeare in his 'Troilus and Cressida,' as appendages to the devil Luxury; and Falstaff is made to say, in the 'Merry Wives of Windsor,' "Let the sky rain potatoes" and "hail kissing-comfits;" from which it has been supposed that they were well known in this country during the reign of Queen Elizabeth. The plant there alluded to was, however, the "sweet Spanish potatoe," which was probably brought into Spain from some part of the East, as it is a native of India, and is spoken of by ancient writers under the name of *battalas*, which were at that time sold in our markets as a great delicacy, and were thought to possess extraordinary powers. They are, indeed, spoken of by old Gerard the English botanist, in his Herbal, as "being roots which do strengthen and comfort nature, and are used to be eaten rosted in the ashes; some, when they be so rosted, infuse them and sop them in wine; others, to give them the greater grace in eating, do boyle them with prunes, and so eat them; likewise making these comfortable and delicate meates, called in shops *morselli placentulæ*, and divers others such-like."

The root which is the object of our present inquiry is indigenous in Chili, and the first notice taken of it by any European writer is by the German botanist Clusius, who in 1588, while residing in Vienna, received a present of two of the tubers from Flanders, under the name of *taratouflis*, of which there is a plate among his rare plants. The next mention of it is by Gerard, who describes it distinctly from the sweet potatoe, and says that the specimens were sent from Virginia, and planted in his garden near London, in 1597. They are, however, said to have been carried into Ireland by Sir Walter Raleigh, on his return from America, in 1586; and we are told in De Bry's Collection of Voyages, by Heriot, who accompanied him, that they are "good food either boiled or roasted, and are called by the Indians *openawk*. It is stated, however, by Humboldt, in his account of New Spain, that the potatoe was unknown in Mexico at the conquest of that country; and we are left to conjecture how it could have found its way across that wide intermediate territory to Virginia, to the soil of which it is naturally a stranger.

It appears by tradition that the roots were planted by Sir Walter at his residence near Youghal, which is still standing, and were soon afterwards found so useful in some disastrous season which threatened famine, that they became generally cultivated in most parts of the island. Here, however, their progress was so slow, that we find them mentioned in 1619 as one of the articles provided for the queen's table, at the price of 2*s.* per lb.! and they were for a long time only grown as delicacies in the gardens of men of fortune. Indeed more than a century elapsed ere they were much noticed; for, although they were brought before the public as an object of national importance at a meeting of the Royal Society, held in March 1663, yet they are not included in the list of vegetables described in the 'Complete Gardener,' which was published by eminent London nurserymen in 1719; and we learn, from the General Agricultural Report of Scotland that their cultivation was very little understood there, even in gardens, until after the year 1740, nor practised in the fields until nearly twenty years later.

In whatever way it may have been brought into general cultivation, it may be justly considered as the most valuable esculent root with which we are acquainted; for, whether regarded as the food of man or beast, its adaptation to almost every variety of palate and constitution, renders it universally welcome. There may, indeed, be some truth in the observations which have been made by the late Mr. Cobbett upon the pauperizing effects which its habitual use has

occasioned among the peasantry of Ireland; but in this country, where it only comes in aid of other food, it adds materially to the comforts of the working classes, and cannot be looked upon in any other light than as a national benefit.

Every one is aware that the roots or tubers, which is the edible part, grow underground, of very irregular form and size; though when planted upon land of the same nature, always producing potatoes of similar quality when the seasons do not materially differ. It is, however, not generally known that the varieties brought to our markets are so numerous, that one account has been lately presented to the Highland Society of experiments made upon 130 different sorts; another has been published by the Agricultural Society of Geneva, containing details by Professor De Candolle, of the properties and produce of 154 species collected from various parts of Europe and America; and there are besides these the records of numberless trials in the county surveys of the United Kingdom, and the transactions of the London Horticultural Society. Now as the qualities of the root when grown in the usual way do not vary, it is evident that these varieties can only be produced by pursuing a different process of planting, as thus—the haulm or stem of the plant, which springs from the tuber, carries a small fruit, called “the apple,” which is about the size and appearance of a green plum, but containing many seeds, which, when again sown, produce new plants; and, singular as it may appear, frequently bear roots of a kind nearly distinct from each other in weight, flavour, and those properties which constitute their chief value.

It will be readily imagined that great advantages may be gained by the production of a superior species; and accordingly trials are constantly made by farmers and gardeners with a view to obtain them; but the operation is slow. For this purpose a few large ripe apples should be chosen from a perfectly healthy plant of an approved kind, and preserved carefully throughout the winter in dry sand, so as to keep them apart from each other. In the beginning of April the seeds should be either picked out from the apples and sown in narrow drills or rows in a prepared bed of garden-mould, or the apples and sand may be mashed up together, and sown in the drills without the trouble of separation.

When the seedling plants are about an inch high, they should be raised carefully, with as much earth as possible adhering to their roots, and planted out in rich and well-pulverized ground, the rows being about fifteen inches wide, and the plants standing ten inches asunder, keeping them clear of weeds both by the hoe and hand-weeding; and when ripe the roots should be cautiously secured from frost, either in an outhouse well covered with straw, or in a pit well guarded from the weather.

Next season the roots should be planted out in the common soil of the farm, which, however, should be of a dry, sandy, and friable nature, and the cultivation should be carried on in the ordinary manner. The potatoes will then arrive at their full size, when their distinctive properties can be ascertained; and whether only those of the former quality, or any new varieties of a better kind are thus procured, it will be found that those grown from seed will continue for several years to yield a larger return than those planted in the usual way, as well as to be more free from the destructive disorder called the “curl.”

Besides what we have here stated regarding the ignorance which prevails respecting the seed of the potatoe, among persons who only see the roots upon their table; it is not improbable that many of those who are conversant with rural affairs are yet unacquainted with the extensive uses to which it is applied when

manufactured into flour; for the public are not aware that it is not only very generally mixed by bakers in our bread, as well as made into starch, but that the substances commonly sold in the shops as tapioca, arrow-root, and various other farinaceous compounds, are in many instances formed of that alone. The bakers are thus accused of adulteration; but the fact is, that, when only a moderate quantity is employed, it improves the lightness of the bread, as well as that of all kinds of pastry; and in Paris, where the bread is well known to be of very superior quality, upwards of 40,000 tons of potatoes are annually converted into flour. When manufactured upon a large scale, means are necessarily resorted to for the reduction of labour, the process of which it is unnecessary that we should describe; but when prepared for family use, the mode may be described as simply peeling off the skin, together with the eyes or any spots by which the root may be discoloured, and then rubbing down the pulp with a strong, rough-holed iron grater, by which means it will be converted into a soft, watery mass, and is to be thrown into a tub of cold water. It should be then well mixed with the hand; after which it should be poured through a drainer, to remove any coarse fragments of the potatoe which may be accidentally present. After being allowed to remain for some time,—until the flour is completely fallen to the bottom,—the water is to be carefully poured off, and the deposit in like manner subjected to repeated ablutions of cold water, which will gradually dissolve all the soluble matter of the root, and must be persisted in until the water, which was at first turbid, becomes quite clear and transparent, some time being of course allowed to elapse between these operations, that the flour may subside completely to the bottom of the tub. It is completely insoluble in cold water, and, when perfectly white and pure, forms a consistent mass, which is then spread out upon a cloth or other contrivance for drying it; and, by rubbing it with the hand as it dries, it falls down into a fine impalpable powder, constituting the potatoe-flour. If kept in a dry place, this may be preserved for any length of time; and from the commencement until the termination of the process, the operation may perhaps occupy a week.

Chemists have found, by analysis, that 100 parts of the potatoe, when deprived of its skin, contain 68 to 72 parts of water, and 28 to 32 parts of insoluble matter, consisting of starch, fibrous matter, and soluble mucilage, which together constitute the flour, the amount and quality of which depend greatly upon the mealiness of the root. When used in the manufacture of bread, it should be mixed with a considerable portion of rye, or wheaten flour; but a very palatable loaf may be formed with about one-third potatoe-meal and two-thirds of that of wheat. Thus it is stated in a late Number of the ‘Bulletin des Sciences Agricoles,’ that 4½ lbs. of the former and 10 lbs. of the latter produce, as nearly as possible, 25 lbs. of bread, or six full-weight quartern loaves. The leaven is prepared in the usual manner; but the dough requires to be rather more kneaded in order to make it rise. The same account further says, that the dough is divided into portions not larger than 6 lbs., which are baked in small pans. The oven is left shut for a quarter of an hour, after which it is partially opened for some time; and, when the bread has had sufficient time to bake well, it is removed. In half an hour it is again placed in the oven, and allowed to remain an hour, the door being left open during the time,—this second baking, it is to be observed, being of great importance. The bread made in this manner is described as of excellent quality, and may be kept for eight or ten days without any apparent alteration. Now, according to all common calculation, the proportion of household bread made

from any given quantity of wheaten flour is as four to three, consequently 10 lbs. would only yield at the most $13\frac{1}{2}$ lbs. of bread; yet we here find that, by the admixture of $4\frac{1}{4}$ lbs. of good potatoe-meal, an increase is obtained of $11\frac{1}{2}$ lbs.

Puddings made with potatoe-flour closely resemble those formed of arrow-root; and a very nutritious article of food for individuals of every age, but particularly for that of childhood, or persons of weak digestion, may be prepared in the same manner as blanc-mange, in the proportion of one large cupful of the meal to eight of milk, the flour being well mixed up with a spoonful or two of cold milk before it is put on the fire to boil, and afterwards allowed to cool. If the juice of any acidulous fruit, such as raspberries, currants, or especially cranberries, be employed instead of milk, a jelly is also thus formed which will be found an elegant and agreeable appendage to the table. One word may also be added to notable housewives upon the essential point of

boiling potatoes:—they should be chosen as nearly as possible of the same size; and, if very large, they should be cut into halves or quarters. They should be put into an iron pot, with a good handful of coarse salt; and the water—which should be quite cold—should not be allowed to quite cover them; nor should the lid be closed. When about half done, those at the bottom should be removed to the top; and when the whole appear completely done, the water should be instantly poured off, and the potatoes left in a napkin, within the pot, by the side of the fire. The boiling of those of moderate size generally takes about three-quarters of an hour; and their being done to the heart can only be ascertained by thrusting a fork through one of them. Cooks generally follow one rule,—either peeling them or boiling them in their *jackets*; but this is wrong; for some sorts are better in their skins, and others peeled, and the difference can only be ascertained by experience.

ATHLONE.



[North Gate, Athlone, Leinster.]

THE town of Athlone, from its position, was formerly one of the most important of the fortified places of Ireland. It was termed, what in fact it was, the "Key of Connaught," being situated on the principal, and, at one time, almost the only road leading from Dublin into the western province of the island—which, like the mountain-fastnesses of Wales and the highlands of Scotland, was the inaccessible retreat where the independent, who could not bring themselves to submit to English law,—the turbulent and restless, to whom it proved irksome,—those who dreaded punishment for crime, and those who feared apprehension for debt,—could safely shelter themselves. The town lies on both

sides of the Shannon, and doubtless arose from the circumstance of there being here a ford of the river. It is conjectured that Athlone is only a corruption of *Ath Luain*,—Moon Ford, or Ford of the Moon. The portion of the town which lies on the eastern bank of the Shannon was termed English Town, and is situated in the county of Westmeath and province of Leinster; that on the western bank was termed Irish Town,—it was the part most strongly fortified, and is situated in the county of Roscommon and province of Connaught.

On the Connaught side of the river there is a castle, said to have been erected, or at least enlarged and strengthened, by King John. This castle, which has

been re-edified in a modern style of fortification, commands the bridge which connects the town,—was once the residence of the lord-presidents of Connaught, and has been the scene of stirring events. The bridge was built, in the reign of Queen Elizabeth, by Sir Henry Sidney, Lord Deputy of Ireland, and has survived the accidents of war as well as the wear of time and traffic. It is only twelve feet wide; and being the highway from Connaught into Leinster, it is a great thoroughfare, and is often disagreeably thronged. In the centre of the bridge is a stone monument, bearing an inscription, nearly obliterated, setting forth that, “in the ninth year of the reign of our most dere sovereign ladie Elizabeth, this bridge was built by the device and order of Sir Henry Sidney, knt., who finished it in one year, by the good industrie and diligence of Peter Levis, clk., Chanter of the Cathedral Church of Christ, Dublin, and steward to said deputy.”

The town of Athlone was incorporated “by charter from James the First, and received a further charter from Charles the Second. The corporation consists of a sovereign, vice sovereign, two bailiffs, twelve burgesses, and freemen. The total number of houses is 1027; of which 546 are slated, and 481 thatched; 182 having seven windows and upwards*.” The only thing which now renders the town of importance is its being a station, or government depôt for troops and military stores. There are barracks for the reception of 2000 men, to which an ordnance-yard, magazines, and hospital are attached. Some trade is carried on by means of an extensive brewery and two distilleries, and by the manufacture of felt-hats. Markets are held three times a week.

Athlone is however well situated for trade. The Shannon is navigable for thirty-eight miles farther up than the town; the navigation, which is interrupted by the bridge and ford, being continued by means of a canal, cut on the Connaught side of the river, by which also the distance is shortened, as the Shannon makes here a considerable sweep. The Grand Canal, also, which communicates with Dublin, joins the Shannon seventeen miles below Athlone.

The capabilities of the Shannon have never hitherto been appreciated so as to render it available to the improvement of Ireland. The attention of the legislature has been repeatedly directed towards it; and during the session of Parliament, 1835, a bill was passed for its partial improvement. The river embraces 234 miles of continuous navigation, runs through the centre of Ireland; and washes the shores of ten counties out of thirty-two, viz., Leitrim, Roscommon, Longford, Westmeath, King's County, Galway, Tipperary, Clare, Limerick, and Kerry. “How can we,” says Mr. Williams, a gentleman who has interested himself greatly on the subject, “convey to English eyes the picture of the Shannon through its great course? Let us suppose a navigable river taking its rise in some distant county of England,—as far from Liverpool as Essex or Middlesex. Suppose it occasionally spreading itself into noble and picturesque sheets of water, of more than twenty miles in length, with numerous islands,—receiving the waters of many rivers, and stretching its bays into the adjacent counties, as it were to increase the measure of its utility and beauty. See it winding its way through Hertfordshire and Bedfordshire, Northamptonshire and Warwickshire, and the rich soil of Leicestershire, and, after passing by Staffordshire, Derbyshire, and Cheshire, falling into the estuary of the Mersey in Lancashire. See it presenting to each of these counties the benefit of fifty miles of navigation, and we shall have a correct view of the extent and capabilities of this river.

“But how shall we describe the state in which it has

remained for ages as to trading intercourse, and in which one-half of it remains to this very hour,—absolutely wanting in all the incidents of navigation? For nearly 100 miles of its length, not a sail or boat is to be met with on its waters. No appearance of utility;—no indications of industry or capital;—even its beauties unknown. Deficient to an extent scarcely credible in roads and approaches to it, and, consequently, having but little connexion with the interior, where nature designed its influence should extend—without any employment of its waters, it flows unheeded by, and unproductive of any good. Over many of its districts of great extent, from the absence of that control which human skill and means could have effected, its waters have become a source of wide-spreading waste.”

A well-known Irish tourist (the Rev. C. Otway), describing his arrival at Athlone from Dublin, says, “The coach stops at the Westmeath side; but neither in the street outside or inside of the inn where you put up, do you find much that may minister to your pleasure or comfort. Neither is there anything in the town, when you walk abroad, to catch your attention;—no antique buildings;—no marks of ancient power or splendour. When you wish to see the Shannon, you go through a narrow street, or rather lane, towards the bridge, which you find narrow, and encumbered with mills and houses, besides sundry annoyances moveable and immoveable;—but still, if you can with any safety, amidst the rush of pigs, cars, and Connaughtmen, stand on this important bridge, and observe the huge volume of the Shannon rushing rapidly and clearly under its arches—look upwards, and you will perceive how the stream bristles with staked eel-weirs; and, above them, the cots of fishermen and the pleasure-yachts of the officers of the garrison; and, across the river, the old castle, commanding the river-pass, once the residence of the lord-president of Connaught, and the well-defended position maintained for the English, in 1641, by Lord Ranelagh, and for the Irish, still more resolutely, in 1690 and 1691, by Colonel Grace.”

Some account of the latter of the historical events thus referred to can hardly be omitted in a notice of Athlone, although details of battles and sieges, while they excite, do not always improve the mind.

In 1690, after the decisive battle of the Boyne, and while King William was investing Limerick, Lieutenant-General Douglas was detached to lay siege to Athlone. It was then held for King James by Colonel Richard Grace, an old and attached servant of the deposed monarch. Before the arrival of Douglas, Grace burned English Town, and crossed the river, determined to dispute the passage. Douglas summoned him to surrender; but Grace fired a pistol at the messenger, bidding him say that these were his terms, and that he would eat his old boots before he would yield. Douglas, after unavailingly battering the place, and not daring to cross the river, drew off his troops.

About a year afterwards, in 1691, General Ginkle invested Athlone. He drove the garrison out of English Town; and, after an interval of a few days, crossed the river, and took the castle and Irish town by storm. This has been considered a bold military achievement, and was very decisive in its consequences. In crossing the river, the English troops had to wade “up to their cravats in water;” and after some desperate fighting, the town of Athlone was taken. This was on the 30th of June; and on the 12th of July, General Ginkle totally defeated the troops of King James at Aghrim, in which St. Ruth, their commander-in-chief, a brave but vain and rash French officer, was killed. Ginkle, who had come over from Holland with William, was created Baron of Aghrim and Earl of Athlone, a title which is still enjoyed by the family.

* Boundary Reports, 1832.

WASHINGTON

THE establishment of the Empire of the United States,—the greatest political event of modern times,—although it was brought about by the combined exertions of many remarkable men, was principally the work of Washington. He was the man, born for the occasion, who, from the beginning to the end,—in war and in peace,—was the great captain of the enterprise, combining, and in some degree directing, the efforts of all his fellow-labourers;—their chief reliance in all their difficulties,—the Atlas on whom rested the central weight of the cause, and of all its cares and responsibilities.

When the American Revolution broke out, in 1773, George Washington was in his forty-second year—about the age of Cromwell at the commencement of the Great Rebellion. Although living, however, at this time on his estate as a country gentleman, he had already not only served in a military capacity, but had distinguished himself as a brave and skilful officer. From the beginning of the quarrel with the mother-country, he had taken the patriotic side; and immediately after the sword was first drawn, in 1775, he was, by an unanimous vote of the General Congress (of which he was a member), appointed Commander-in-Chief of the Forces of the Thirteen Provinces.

At the moment when he was placed in this conspicuous station, the cause which had been committed to him was in circumstances which demanded all his exertions, all his vigilance, and all his moral courage. The Congress had found a general; to the general himself was left the task of organising an army. Between 14,000 and 15,000 men were indeed enlisted, and bound to serve for a short period; but the force thus collected could only be said to constitute so much rude material, which might help in the formation of an army. An effective army consists not of soldiers only, but of many other things equally essential. The soldiers must be officered, and disciplined, and armed, and clothed; there must be a commissariat to supply them with provisions, and financial arrangements to secure them regular pay. Of all these indispensable requisites the American troops were either entirely or nearly destitute when Washington took the command of them. In the state in which the country was, with scarcely an established government, and the whole social edifice violently shaken, the difficulties with which he had to contend were necessarily of the most formidable and trying nature; but his patience and perseverance gradually overcame them. The caution of the Congress, and the jealousies and competing claims of individuals in the camp, gave way before the influence of his character, and the manifest disinterestedness of his whole conduct; and in no long time he had the satisfaction of seeing order established in every department of the service.

We cannot here follow him through his military career; but we may remark that the greatness of his character was shown, not so much in a series of splendid victories as in the unflinching courage with which he bore up against the multiplied embarrassments which long continued to press upon him, and in that dauntless spirit and reliance on the eventual success of his cause which no temporary reverse was ever able to shake. His situation only a few months after he accepted the command is strikingly described in one of his own letters to the Congress. "It gives me great distress," he writes on the 21st of September, 1775, "to be obliged to solicit the attention of the Honourable Congress to the state of this army in terms which imply the slightest apprehension of being neglected. But my situation is inexpressibly distressing;—to see the winter fast approaching upon a naked army,—the

time of their service within a few weeks of expiring,—and no provision yet made for such important events. Added to these, the military chest is totally exhausted;—the paymaster has not a single dollar in hand;—the commissary-general assures me he has strained his credit, for the subsistence of the army, to the utmost;—the quartermaster-general is precisely in the same situation;—and the greater part of the troops are in a state not far from mutiny upon the deduction from their stated allowance." Thus left without the support necessary to render his exertions of any avail, had the American commander-in-chief been an ordinary man, he would have thrown up his commission. But nothing could move Washington. In the circumstances in which he was placed, he could not even venture upon the chance of offensive operations, and was obliged to suffer in silence all the strictures that were passed upon an inactivity to which he was constrained by embarrassments, the extent of which was known only to himself, and which it was of the utmost importance to conceal from the public. These complaints and clamours were heard not only throughout the country, but even in the camp itself; and the disgust with the service which was thus produced became so general, that full a-third of the men, after their original term of six months had expired, refused to enlist again, and returned to their homes.

A new army, however, having at length been raised by great exertions on the part of Dr. Franklin and other commissioners appointed by Congress, Washington at length, on the 17th of March, 1776, made an attack upon the British garrison in Boston, the result of which was their expulsion from the town. But a succession of disasters speedily followed this success. In the following August the American general was driven from Long Island (which he had fortified), in the neighbourhood of New York; and, soon afterwards, that important town itself, in spite of his best endeavours to save it, fell into the hands of the enemy. From this point Washington was gradually driven, first to the opposite bank of the Hudson, and then across the whole province of Jersey to the Delaware. By this time also, through losses and desertions, the number of his troops had fallen to about 3000 men. The Congress had fled from Philadelphia to Baltimore; and, dismayed by the victorious progress of the enemy, the spirit of the country was quite broken.

Washington however neither lost heart nor relaxed his watchfulness for an opportunity to strike a blow which might yet save his country; and this opportunity he at length found. He had now crossed the Delaware, and his pursuers were only waiting for the setting in of the ice to follow him, when on the evening of Christmas Day he suddenly recrossed the river, and, falling upon a division of the British army which lay at Trenton, took nearly the whole of them prisoners. "This successful expedition," says an American writer, "first gave a favourable turn to our affairs, which, after this, seemed to brighten through the whole course of the war." Following up his success, Washington, on the 28th, attacked another detachment of the British at Princeton, which he also completely dispersed, killing 60 men and taking 300 prisoners. The importance of these exploits, however, is to be measured, as we have said, by their moral effect in dispelling for ever the despondency into which the Americans were fast sinking, and rousing them to new hopes and new exertions. The advance of the British troops was not permanently checked, for within a year Lord Cornwallis found himself in possession of Philadelphia; but the acquisition was rendered useless by the energetic spirit of resistance that was now every where awakened and in action in every part of the country which had lately been supposed to be all but conquered. Recruits were

now easily raised in great numbers, both for the forces commanded by Washington in the south, and for those sent under General Gates to oppose Burgoyne in the north. Lord Cornwallis found himself shut up at Philadelphia with hardly the power of moving from the ground he occupied; and the expedition of General Burgoyne ended in the surrender of himself and his whole army.

The history of the rest of the war—down to the annihilation of the army of Lord Cornwallis by Washington, at New York, on the 19th of October, 1781, with which it may be said to have terminated—would, if we had room to detail it, illustrate in the same manner in its whole course the rare and noble qualities of the American commander. Few military leaders however had such a complication of difficulties to struggle with as beset him to the very end of his career; and in triumphing over them as he did, he showed himself to be rich in many higher endowments than mere military sagacity and skill. It was therefore with great fitness that, after having saved his country by his sword, he was chosen to direct her in her entry as an independent nation upon the path of peace. Washington was unanimously elected the First President of the United States in March, 1789. In this high office he displayed the same wisdom and firmness which had distinguished his previous services; and in circumstances of considerable difficulty through which, not without opposition from various quarters, he had to guide the young republic, proved himself born to attain and hold ascendancy not less in civil affairs than in arms. His grateful and admiring country again recognized him as her first citizen, by continuing him at her head for a second term of four years after the expiration of his first appointment; and he might have been a third time elected if he had not found it necessary to decline further public service from his advancing years and declining health. His last act in office, however, was one of the most useful of his useful and glorious life; we allude to the address in which he took leave of his countrymen as a public character, and in which he left them as admirable a legacy of political wisdom as was ever bequeathed by any patriot of any nation. This address, if his country and the world owed him nothing else, would be enough to immortalize the name of Washington. But the life, of which this was the last act, was throughout crowded with eminent services, and its whole course was such as to entitle his memory to be held in everlasting remembrance by all the reverers either of public greatness or private worth. Seldom have the two been exhibited in the same character in such beautiful and perfect combination.

Washington was not long spared to enjoy the quiet of his well-earned retirement. His death took place on the 14th of December, 1799, within three years of the time when he quitted public life.

The Choice of a Physician.—To choose a physician well one should be half a physician one's self: but as this is not the case with many, the best plan which a mother of a family can adopt is to select a man whose education has been suitable to his profession;—whose habits of life are such as prove that he continues to acquire both practical and theoretical knowledge;—who is neither a bigot in old opinions nor an enthusiast in new;—and, for many reasons, not the fashionable doctor of the day. A little attention in making the necessary inquiries will suffice to ascertain the requisites here specified; to which should be added, what are usually found in medical men of real worth, those qualities which may serve to render him an agreeable companion; for the family physician should always be the family friend.—*Lady Mountcashell on Physical Education.*

TO THE SMALL CELANDINE*.

PANSIES, lilies, kingcups, daisies,
Let them live upon their praises;
Long as there's a sun that sets,
Primroses will have their glory;
Long as there are violets,
They will have a place in story:
There's a flower that shall be mine,
'Tis the little celandine.

Eyes of some men travel far
For the finding of a star;
Up and down the heavens they go,
Men that keep a mighty rout!
I'm as great as they, I trow,
Since the day I found thee out,
Little flower!—I'll make a stir
Like a great astronomer.

Modest, yet withal an elf,
Bold, and lavish of thyself;
Since we needs must first have met,
I have seen thee, high and low,
Thirty years or more, and yet
'Twas a face I did not know;
Thou hast now, go where I may,
Fifty greetings in a-day.

Ere a leaf is on a bush
In the time before the thrush
Has a thought about its nest,
Thou wilt come with half a call,
Spreading out thy glossy breast
Like a careless prodigal;
Telling tales about the sun,
When we've little warmth, or none.

Poets, vain men in their mood!
Travel with the multitude:
Never heed them; I aver
That they all are wanton wooers;
But the thrifty cottager,
Who stirs little out of doors,
Joys to spy thee near her home;
Spring is coming, thou art come!

Comfort have thou of thy merit,
Kindly, unassuming spirit!
Careless of thy neighbourhood,
Thou dost show thy pleasant face
On the moor, and in the wood,
In the lane—there's not a place,
Howsoever mean it be,
But 'tis good enough for thee.

Ill befall the yellow flowers,
Children of the flaring hours!
Buttercups, that will be seen,
Whether we will see or no;
Others, too, of lofty mien;
They have done as worldlings do
Taken praise that should be thine,
Little humble celandine!

Prophet of delight and mirth,
Scorned and slighted upon earth!
Herald of a mighty band,
Of a joyous train ensuing,
Singing at my heart's command,
In the lanes my thoughts pursuing,
I will sing, as doth behove,
Hymns in praise of what I love!—

WORDSWORTH.

PENAL LAWS AND THEIR MORAL EFFECTS.

(From Report on the Penitentiaries of the United States.
By William Crawford, Esq.)

It is well known that the population of New England ranks far superior to any other part of the Union in morals and intelligence. Education is universal, the laws are ably administered, the police is well regulated, and pauperism is limited; and yet the Returns in the Appendix tend to show that there is more crime in proportion to the population in the most enlightened of these States, viz. Connecticut and Massachusetts, than

* Common pile-wort.

in Pennsylvania, part of which is but recently settled, or in the more western States, which are comparatively uncivilized. The false impression which these statements are in this respect calculated to convey, is in a great measure to be ascribed to the fact that in New England few crimes pass undetected and escape punishment; but this is far from being the case in other parts of the Union. As the traveller proceeds towards the western and southern States he will find that the numbers in the penitentiary must not be taken as the extent of even the higher classes of offences. In many counties of even New York and Pennsylvania, and still more in those of other States, offences pass unprosecuted which in New England would scarcely fail to incur punishment. In a newly-formed and scattered population, such is the value of labour that the interests of the community would often materially suffer by the incarceration of its members. The prosecution of an offender is attended with the loss of valuable time: hence there is a disposition to overlook crimes which are not of the most flagitious character, and which do not awaken a strong sense of insecurity to person as well as to property. This feeling of repugnance to prosecute for offences is carried so far in the western States, that no inference could be more unsafe than to judge of the extent of crime from the returns of commitments to the penitentiaries in those districts. The state of Illinois presents an illustration in point. Its population at the last census amounted to 157,000 souls, consisting of natives of various countries, differing not less in morals than in manners. Crimes are of course matters of frequent occurrence, and yet I was informed during my stay in America that there was not a single prisoner in the penitentiary convicted of any serious offence. The discrepancies between the number of commitments and the actual extent of crime, in the more western as well as the southern States, merit peculiar attention. There exists in those parts of the country a great recklessness of human life. Personal insult is resented by the immediate gratification of revenge. A custom prevails of carrying pocket-pistols, or of wearing a dirk in the bosom, while scarcely any of the labouring classes are without a large clasped knife, which, opening with a spring, becomes a truly formidable weapon. Hence assaults of the most desperate character in the public streets frequently occur, and death to the parties often ensues. Prosecutions, however, arising out of these acts of violence, are by no means common. These offences pass in many instances, in a legal sense, entirely unnoticed. An appeal to a court of justice in such cases would not be sanctioned by public opinion; and even if the offender were brought before a jury they would enter into a consideration of the provocation given by the parties, and discountenance by their verdict the practice of rendering such acts amenable to the ordinary course of criminal justice.

* * * * *

It is impossible, on examining the prisons to which these tables refer, not to be struck with the great proportion of crime which the coloured bears to the white population. The causes are too obvious. The force of public opinion has in a remarkable degree contributed to retard the education and moral improvement of the coloured race. Hence these oppressed people form, of course, the most degraded class of the community. This prejudice appears to me to be, if possible, stronger in the free than in the slave States. A law has recently passed, even in Connecticut, discouraging the instruction of coloured children introduced from other States; and in the course of the last year a lady, who had with this view established a school for such children, was prosecuted and committed to prison. From a feeling which is unknown in Europe, a coloured person,

although residing in the most enlightened of the States, is prevented from attaining that position in society to which his natural intelligence, aided by the benefits of education, would inevitably raise him. Under such circumstances the only wonder is, that there should not be more crime among a population so numerous and so disadvantageously situated.

There never was a greater delusion than the opinion which has for many years prevailed in England in favour of the superiority of the criminal institutions of Pennsylvania. This error has doubtless arisen from confounding the mitigation of the penal law, which at an early period honourably distinguished the legislature of this State, with improvements in prison discipline, in the progress of which New York preceded it, and in which Pennsylvania has been considerably behind England. Assertions have nevertheless been made by writers upon this subject, that the solitary imprisonment of criminals originated in Pennsylvania. A mere reference to dates will show the fallacy of this opinion; and also prove that so far from either the suggestion or the example of this practice having first occurred in Pennsylvania, that State has been indebted to England for the advantage of both.

The first public allusion in Pennsylvania to the solitary confinement of criminals is to be found in an Address issued in 1787 by the "Philadelphia Society for alleviating the Miseries of Public Prisons." Referring to the recent law which sentenced criminals to hard labour, "publicly and disgracefully imposed," the committee suggest that, as the good intended by the measure had not fully answered, "punishments by more private or even solitary labour would more successfully tend to reclaim." Eleven years, however, prior to the date of this Address, which, it will be observed, emanates from an association of private individuals, and contains by no means a strong recommendation of solitary confinement, the statute of the 19 Geo. III., c. 74, containing the passage above recited, was enacted by the British Parliament. The same sentiments were reiterated in an Act passed six years afterwards for the erection of the penitentiary at Gloucester. This prison contained seventy-one cells strictly solitary, without any means of exchanging communication, and in which convicts were confined at hard labour. It was opened in the early part of 1791, prior, I believe, to the erection of the sixteen cells for men and fourteen cells for women in the Walnut-street Prison (which, however, were in no respect solitary, and in which no labour was ever performed); and it is a fact worthy of notice, that at the time, or within a few months of the period, when the solitary system at Gloucester was in operation, criminals were actually worked in gangs with iron collars round their necks, and chains upon their persons, in the streets of Philadelphia. It is singular to find that those who ascribe so much excellence to the Walnut-street Prison in its earliest days, and who have seriously designated its management the "ancient Pennsylvania system," should, in 1828, have recommended for the government of the Eastern penitentiary a plan entirely different from that which it is alleged was enforced in Walnut-street Prison;—namely, solitary confinement without labour. In the penal law of 1794 the words "penitentiary houses" occur, the phrase being evidently borrowed from the Act of Parliament passed in England in 1776.

* The Office of the Society for the Diffusion of Useful Knowledge is at 59, Lincoln's Inn Fields.

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THE RUFF AND REEVE.



[The Ruff and Reeve.]

THE periodical changes which the plumage of the feathered race undergoes have long excited the attention of naturalists. To a great extent these changes are connected with atmospheric temperature. The severities of winter demand a warmer, a fuller, and often a differently coloured garment, in order that the vital heat of the system may be duly preserved. The autumnal change of colouring (where such occurs) is from variegated, or bright and rich tints, to dusky, or pure white; the spring change restores these tints again. But besides the changes here alluded to, and which have a special reference to the preservation of the temperature of the body in winter, and secondarily to concealment—changes which are exemplified most fully in the ptarmigan and other allied species,—there is another change of dress, if change it can be called, peculiar to many birds, which consists in the assumption of ornamental plumes in the males on the approach of spring. Among the species peculiar to the hotter climates of the globe, this arrangement predominates to a very great extent; but it is also remarkable in some species

indigenous in our latitudes, and eminently so in the bird now before us (*Machetes pugnax*, Cuv.), of which the male, in consequence of the ornamental plumes on the neck during the breeding season is termed the ruff, while the female, to whose attire no such addition is made, is termed the reeve.

The ruff (applying the term, for convenience sake, as is usually done, to both sexes), belongs to the order *Grallatores*, and is one of our summer birds of passage, leaving our latitudes on the setting in of the cold months of winter. A few stragglers, however, occasionally remain with us during the whole of the winter season; and on one of the severest days of December last, an individual was shot on the banks of the Thames, near Hampton, by Mr. Gould, the author of the 'Birds of Europe' and other works on ornithology. This is certainly a very remarkable instance; indeed, we are not aware of another on record. The individual in question was a male in its plain or winter livery.

It is seldom before the middle of April that the ruff visits our island and the parallel latitudes of the adja-

cent continent, on its return from its winter quarters in the sunny districts of the south; and it is still later before it reaches more northern regions, for it extends its vernal migration even as far as the bleak shores of Iceland. Its favourite haunts and breeding-places are extensive fenny districts or marshes, where it can enjoy undisturbed seclusion, and procure food in due abundance. In England, the fens of Lincolnshire and Cambridge are its principal resort, but it occurs also in various other places of a similar character. In Holland it is very abundant. It would appear that the males are the first to arrive at their destined station; at all events they keep themselves in distinct bands, separate from the females. As the breeding time draws near, beautiful long plumes round the neck, forming a ruff, and large full ear-tufts, rapidly develop. The males now begin to *hill*, as it is termed—that is, they seek some spot a little elevated above the surrounding marsh, to which, as to a common centre, numbers are gradually drawn. Here each individual selects its own station or little territory, for the possession of which it strenuously contends; the attempt of a rival to encroach upon the circle is immediately followed by a hard-fought battle, the territory being ceded by the vanquished to the victor. These battles and contests are almost incessant, at least during the day; for at night they all return to the marsh in order to feed, (in this respect their habits being nocturnal), but in the morning each resumes its station, and the contests are again carried on. Here, full of animosity against each other, and jealous of each other's rights, they await the arrival of the females. The arrival on the hill of one of the other sex is the signal to a general contest. The scene is now one of perpetual warfare, female after female arriving at the hill, so that "the theatre of these battles," as Selby observes, "soon becomes bare of grass from the constant traversing of the combatants." Not only have the neck and ear plumes now attained their perfection, but the face of the male becomes covered with small yellowish papillæ, or fleshy excrescences, instead of the short feathers with which it is ordinarily clothed. During the whole of May and the early part of June, this scene of warfare continues with unabated energy. The manner in which the ruff fights has much resemblance to that of the game cock; the head is lowered, the plumes are thrown up into a disc, the tail is expanded, and each adversary attempts to seize the other with his bill, following up his advantage by a blow with the wing. The legs are too feeble to strike with, and they are not armed, as in the fowl; the contest, therefore, is seldom fatal, the vanquished being rather wearied out and dispirited by the superior strength and determination of his antagonist than seriously injured. Towards the latter part of June this combativeness abates, the papillæ on the face disappear, and shortly afterwards the fine plumes are moulted off, their place being supplied by ordinary feathers.

The females, or reeves, which, as we have intimated, only visit the hill at intervals, breed among the swamps. The nest consists of little more than a slight depression among a tuft of grass or rushes, or other herbage which luxuriates in such situations. The eggs are four in number, and closely resemble those of the snipe, only being somewhat larger. In the group of grallatorial birds, to which the present species belongs, the females usually exceed the males in size; here, however, the females are much smaller than the males, and moreover undergo no corresponding changes of plumage. With respect to the beautiful plumes which for a season ornament the ruff, one circumstance is very remarkable: we allude to the diversity of their colouring. In no two examples is the colour precisely alike. We have seen them pure white; white elegantly barred with black; reddish brown intermixed with black, or barred

and spotted; pure glossy black; grey and black, &c. It appears, moreover, that in no individual are these colours the same for any two seasons.

There are several points in which this singular species evidences an analogy to the true gallinaceous groups of the RASORIAL order. Agreeing in food and general habits with the *tringæ* and snipes, it differs from them in being decidedly polygamous, the females courting the society of the males, as is the case with the wild turkey and some others of the order *rasores*. The temporary plumes of the neck, resembling the hackled feathers of the cock, the development of fleshy excrescences about the face, the pugnacious habits, the jealousy of encroachment upon a preoccupied territory, put us in mind of the common fowl, and (with the exception of the hackles) of the pheasant, capercaillie, and black grouse.

The ruff is among the list of birds whose flesh is accounted as a delicacy for the table; indeed, it is held in high esteem, and the birds, therefore, always fetch a good price in the market. Considerable profit is made by various fowlers in the fens of Lincolnshire, who devote themselves at certain seasons of the year to the business of catching them and feeding them for sale. The means employed for taking them are chiefly clapnets, into which they are lured by various devices, one of which is a stuffed bird of their own species. The seasons for taking them are, first, April and May, when the males are hilling, and pugnacious in the extreme; and secondly, September, after the young are fully fledged and ready for the autumnal migration, when they with the old birds pass to more southern latitudes. Few birds seem so indifferent and contented in captivity—a circumstance fortunate for the fowler, whose object is to fatten them for the market. Their natural food consists of worms, small insects, &c., with which the soft ooze or mud of the marsh abounds; but they are easily reconciled to a change of diet, and feed eagerly upon bread and milk, boiled wheat, and other articles of a farinaceous quality, upon which they thrive and become plump. Captivity, which subdues the spirit of most wild creatures, strange to say, does not abate the pugnacity of the full-plumed males taken in the spring. Not only will the appearance of a reeve excite them to strife, but a bowl of food set before them will produce the same effect, and lead to a tumultuous conflict, which, as the arena is very limited, and the weaker have no chance of escape, is sometimes known to result in fatal consequences.

Of the variable colour of the neck and ear plumes we have already spoken. The rest of the colouring may be thus described. The upper parts of the body are varied with a mixture of brown, pale yellow, and black; the sides of the chest and flanks are barred with black on a pale yellow ground. The under surface is white. In some individuals these tints are much darker than in others.

The reeve in summer has the upper surface varied with glossy black on a cinereous grey ground; in winter the colour becomes more uniform, losing the markings of black. The young of the year have the sides of the neck and chest and the region round the eye of a yellowish brown, with a tinge of orange, and the back is dark brown, glossed with purple, each feather having a deep margin of pale yellowish brown. In this stage it has been mistaken for a distinct species.

ON WHEATEN BREAD.

THE qualities of bread vary materially, not only in flavour, according to the species of grain of which it is formed, and the mode of manufacturing it, but also in its nutritive properties, for it has been shown by the analyses of chemists that 1000 parts of the corn usually

employed contain the following proportions of the different substances of which it is composed : namely,—

	Whole Quantity of Nutritive Matter.	Mucilage or Starch.	Saccharine Matter or Sugar.	Gluten or Albumen.
Wheat ...	955	765	—	190
Rye ...	792	645	38	109
Barley ...	920	790	70	60
Oats ...	743	641	15	87

It is thus evident that the same weight of wheat is capable of affording more nourishment than any other kind of bread ; and, if estimated by measure, it is still superior, as the bushel weighs heavier than any white corn : the average of which, of the ordinary qualities, may be assumed as

Wheat 60 lbs.	Barley 50 lbs.
Rye 56 „	Oats 40 „

In former times the peasantry of these kingdoms used only bread made of rye, oats, or barley-meal, and that of wheat was exclusively devoted to the nobility and gentry, with a few of the wealthy inhabitants of the great towns ; indeed, so prevalent was the employment of inferior substitutes for this “ staff of life,” that, in the description of a farmer’s life, as depicted in the ‘ Vision of Piers Ploughman,’ which is supposed to have been written sometime in the 14th century, we find

“ A few croddes and creyme, and a cake of otes,
And bred for my barnes (children) of beanes and of peses,”

in common use by persons of that class. In later days the progress of industry, and the consequent increase of the comforts of life, gradually introduced wheaten bread into more general consumption ; and now all other grain has nearly disappeared in the formation of our household loaf. The use of oats in the shape of “ crowdly,” “ stirabout,” and “ porridge,” is indeed still common among the labouring classes of Scotland and Ireland, while in the north of England and some parts of Wales, a mixture of rye and wheat, under the name of “ meslin,” is usual among respectable families, and in the north of Europe rye-bread is universal. It is not, however, alone in the weight of nutriment that the superior advantage of bread made of wheat consists, but in the greater quantity which that grain contains of the substance termed “ gluten ;” which is considered by chemists as a sort of half-animalized matter, and not only imparts its peculiar flavour to the bread, but being also more adhesive and fermentable than the other ingredients, occasions it to rise better in the making, and its greater absorption of water renders it more spongy.

A Winchester bushel of wheat of fair quality, weighing 60 lbs., is usually calculated to yield 48 lbs. of household flour ; which is the sort chiefly used for the manufacture of bread throughout England. The quantity of bread produced by the same weight of flour depends, however, in some measure upon the properties of the corn ; and it has been shown by a comparative experiment tried a few years ago upon Scotch and English wheat, of apparently equal quality, that a quarter of the latter, though yielding rather less flour, yet when made into bread gave 13 lbs. more than the former, which is accounted for by the greater strength of sunshine under the climate of England having an effect upon the grain when ripening, which occasions the flour to absorb more water in the formation of the dough.

The corn, after being cleansed by the miller in a circular screen of wire, the scutchers of which are made to revolve with great rapidity, is then poured into the hopper of the mill, which, being placed over the burr-stones with which it communicates, and which grind it, feeds them gradually ; the stones being set so close together as to convert the grain into a meal, which,

when bolted, feels smooth if rubbed between the finger and thumb. When flour of different qualities is to be made, the process is, however, more complex : as thus—

The burr-stones are placed so far asunder as to cut the wheat into a coarse kind of meal, called “ sharps,” which is reground, with the stones set so close together, as by their friction to occasion so intense a degree of heat in the flour, that the hand can hardly bear it. It is then spread upon a floor, and kept continually turning until it becomes cool. When quite cold it is passed through a bolting-machine, which revolves on its axis, and is furnished with coarse wire-gauze, which permits the passage of the bran and pollard. The flour is then put a second time through a similar engine covered with the finest kind of wire-gauze, which divides it into the qualities termed “ firsts” and “ seconds,” or fine and household ; the proportions are usually as follows :—

Fine Flour	25½ lbs.
Household ditto	22½
Pollards	8
Bran	2¾
Waste	1¼

A sack of flour must weigh, by the law of England, 280 lbs. ; and when the assize of bread was fixed by the Lord Mayor of London, it was calculated as sufficient to make eighty-four quarter loaves of 4 lbs. 5 oz. each. The bakers, however, admit that if the flour be of good marketable quality, it will make eighty-six such loaves, or 370 lbs. 14 oz. of bread, equal to 92½ loaves of the present weight of 4 lbs. each. The charges on manufacturing a sack of flour into bread, and the baker’s profit, were estimated at 15s. ; it is thus evident that, when flour is at the actual price, as stated in the last returns, of 38s. per sack, the quarter loaf should be sold for 7d. Cheap bakers, indeed, charge only 6½d., which they are enabled to do by means of slack baking, by the use of inferior qualities of flour, and by the mixture of a considerable portion of potato-meal, which, however, is so far from containing anything deleterious, that a small quantity of it, to the amount of not more than one-sixth, rather improves the appearance of the bread.

It may also be observed that the use of alum, which is so much decried by the public, as being injurious to the constitution, is not pernicious, unless when employed in quantities which never enter into the composition of bread ; and the only unwholesome effect which can be in that case ascribed to it is, that it may occasion slight constipation of the bowels. It partly improves the colour of the bread, but the chief object of that, or any alkali, is to correct a certain degree of clamminess and unpleasant taste, approaching to acidity, which the bread acquires when made from new flour, or that which has been heated, or otherwise of indifferent quality. This, it is imagined, would be better attained by the application of magnesia ; and it is the opinion of an eminent chemist that the addition of thirty to forty grains of the subcarbonate of magnesia to every pound of flour, in proportion according to its quality, would render the bread light, porous, good-tasted, and not the least clammy.

A Special Commission was appointed in the year 1817 by the French Government, for the purpose of inquiring into the state of the corn harvest, and framing directions for the management of damaged grain, and the baking of bread ; the latter of which are as follow :

“ As the yeast is the principal agent in the fermentation, nothing is more important than that it should be procured in the freshest and the best state.

“ All potable-waters are good for baking : the best flour imbibes about one-half of its weight of water ; middling good, from a fifth to a fourth. The tem-

perature of the water should be in an inverse ratio to that of the air,—that is, as much colder as the air is hotter, and *vice versa*.

“The baking of flour which has been made from germinated wheat, ought to be proceeded in with much greater rapidity than that of flour from grain noways injured; because the gluten of such flour having been more or less destroyed, the process of its fermentation goes on much quicker. The water employed ought to be of less warmth in all the operations; the dough should be kneaded more firmly, and divided into loaves of smaller size; the batch should be put into the oven a quarter or half an hour sooner than usual, after it is completed; the oven should be raised to a higher temperature; the bread should be left in the oven only forty-five minutes, or less, instead of an hour, as in the ordinary case, and it ought not to be given out for consumption till two or three days after it has been baked.”

By attending to these directions, bread made of damaged grain may be obtained sufficiently salubrious and of good appearance; but it is only by a mixture with good flour to the extent of one-half or two-thirds, that the taste of the loaf can be so improved as to entitle it to be considered as palatable household bread. It deserves also to be noticed, that the employment of a greater quantity of yeast than is usual in the fabri-

cation of good bread, with a view of improving the quality of that made of inferior flour, will have a contrary effect; for although it may render its external appearance better, it will more fully develop the bad qualities of the flour in point of flavour.

Those persons who use home-made bread, and who naturally suppose that they are thus secure of having it of the best quality, yet can never be certain of that unless they also use their own wheat, and grind it themselves or attend to see it ground at the mill; for if they buy their flour of the miller or the baker, it will necessarily be in great part made from new wheat, and not improbably mixed up with that which is damaged. They should therefore keep a stock in hand, frequently turning and airing it in the granary, so as to keep it perfectly sweet, and not grind it until it is at least six months old. They need not be particular about the colour of the grain; for if it be plump, dry, and smooth, with a certain feel of mellowness when passed through the hand, it will assuredly answer all the purposes of excellent bread. The sweet, corny taste which is discernible in the brown loaf, arises from the skin which immediately envelopes the farina not being removed, as is done in the fabrication of fine meal; but this flavour can be retained in bread made of superfine flour, by mixing the dough with water in which a quantity of bran and pollard has been boiled.

ELIZABETH CASTLE,

BAY OF ST. AUBIN'S, ISLAND OF JERSEY



[Elizabeth Castle, Jersey.]

THE Channel Islands, though now for nearly seven centuries (since the Norman Conquest) an appendage of Great Britain, have been, until lately, comparatively little known to the great bulk of the British population. The nature of the government of the islands, their peculiar privileges, the manners, customs, and even the language (a corrupt Norman French) of the inhabit-

ants, the former importance of the islands, with respect to commanding the British Channel, &c., are all matters of interest, which might naturally be supposed to excite curiosity; yet, with the exception of a few detached notices; a History of Guernsey, in 4to., which was published in 1815 by Mr. William Berry; and a lively and amusing History of Jersey, published in 1694 by the

Rev. P. Falle, (one of the parochial clergy of the island,) were the only accounts to be had, until the appearance, in 1834, of the late Mr. Inglis's interesting work, entitled the 'Channel Islands.'

Our present object is not to enter into any account of the islands, but simply to describe the object delineated in the engraving. The Bay of St. Aubin's, in Jersey, is the largest in the island: the tides rise and fall upwards of forty feet in it, so that the contrast between high and low water is very singular. At the head of the bay are the towns of St. Aubin and St. Helier's, the one at the eastern, the other at the western side; and between the two stretches a sandy, shelving beach, studded with Martello towers. St. Helier's is the chief town of Jersey. In the centre of the bay, within about three-quarters of a mile from the pier of St. Helier, is a large rock, not less than a mile in circumference, the surface of which is covered with the buildings and fortifications of Elizabeth Castle. The only access, on foot or horseback, from St. Helier's to the castle during low water is by a natural causeway, or beach of pebbles and sand, termed the bridge. When the tide is full the castle must be approached by water.

The Rev. Mr. Falle, speaking of Queen Elizabeth, says,—“That incomparable princess, knowing that 'tis a great part of wisdom, in the profoundest peace, to be prepared for war, had even at that time a careful eye on the safety of these islands. She began that noble castle in Jersey, which from her is to this day called Castle Elizabeth, but lived only to finish that part of it which is above the iron-gate, and is called the upper ward, the lower parts having been since added to that fortification.” Many additions were made to the castle in Charles I.'s time. There is a tradition, mentioned by Inglis, that in order to defray the original expense of building Elizabeth Castle, all the bells of the churches and chapels of Jersey were seized, and shipped for St. Malo, to be sold; but that the vessel which carried them foundered in a storm, to the satisfaction of those who regarded the seizure as a sacrilegious act, and the loss, therefore, as a judgment from heaven. Falle simply says that an Order in Council was made in 1551, enjoining the bells of the island (leaving one in every church) to be sold, and the money to be applied to the building of the castle.

During the Civil War, the inhabitants of the Channel Islands adhered to the royal cause; and Elizabeth Castle, which was the residence of the governor of Jersey, made a stout resistance to the parliamentary forces; but the garrison were ultimately obliged to surrender. Sir Edward Hyde, afterwards the celebrated Lord Clarendon, resided in Elizabeth Castle nearly two years, during which he composed a large portion of his well-known history.

Elizabeth Castle, as a fortification, has been thrown into the shade by a huge fortress, termed Fort Regent, which was begun in 1806. It was erected at an expense of 800,000*l.*, as stated by Mr. Inglis, who seems also to be of opinion that the utility of the work bears no proportion whatever to the immense sum of money which it cost.

Of the present state of Elizabeth Castle the following quotation from Mr. Inglis's work will give a sufficient account,—the concluding sentiment will, we are sure, be assented to by every reader:—

“The rock on which Elizabeth Castle is built is not less than a mile in circumference; and I was surprised, on passing through the gateway, to find a wide grassy level, terminated by extensive barracks and their appurtenances. In war-time, this fortress was an important place, and, no doubt, presented to the eye and ears of the traveller a very different scene from that which it now presents. Decay seems now to be creeping over it; and although a solitary sentinel is still to

be seen pacing to and fro; and although pyramids of shot still occupy their accustomed places, grass and weeds have forced their way through the interstices; and the rows of dismantled cannon show that the stirring days of war have gone by. May the weeds long grow, and the rust continue to creep over the engines of death!”

On the top of a rock, situated a little to the south of Elizabeth Castle, and, like it, accessible at low water, may still be seen the rude remains of a hermitage, the canonized tenant of which is said to have given name to St. Helier's.

CHINA.—No. XII.

SILK-WORMS AND SILK.

THE zoology of China offers to our consideration little that is new or peculiar. All the larger quadrupeds of China are common in many other parts of the world, and are too well known to require any description. We shall also spare our readers the description of flying cows and flying apes,—of the baboons on the mountain Tayung, in the province of Suchuen, “which in bigness and shape are very like a man,”—of the musk-deer, which when taken out of the kingdom of Lu into the kingdom of Laos “dies instantly, like a fish which is taken out of the water,”—and of all the other marvellous beasts, birds, insects, and fish, which Marco Polo, and, after him, credulous missionaries or imaginative Dutchmen, palmed upon an age that had a surpassing facility of belief. We will only dwell on what is peculiar to China and authentic or curious.

In the zoology of China there is, in fact, nothing more worthy of notice than that which is, to all appearance, the most humble and insignificant;—this is the silk-worm, the history of which, and of its valuable product, is full of interest and instruction.

In the best ages of Greece and Rome silk was hardly known but by report; and the little information obtained by the interest and curiosity of merchants was confounded and obscured by being mixed up with some notions of the cotton-plant. The soft wool of the Chinese is celebrated by Virgil as combed from trees; and nearly four centuries elapsed before a distinct knowledge of the truth found its way to Europe. The manufactures of this precious substance—then more costly than gold—were patiently unravelled by the artists of Greece, and re-manufactured with a mixture of some less costly material; the transparent garments formed of the mingled stuff were worn by ladies of high rank at Rome, and the moralists of the time were strong in their disapprobation of the indecent innovation. The terms of “woven air” and “textile clouds” will demonstrate the extreme thinness which the high price of the material or the caprice of the purchaser compelled the workman to produce. But the communication between China and the western world, which the wars of the Roman and Parthian empires had restricted, became more easy by the destruction of the latter in the third century;—the supply of silk increased, and a rich Roman might now, without the imputation of extravagant luxury, be clothed in the gorgeous fabrics of the East. In the reign of Justinian (A. D. 552) the valued manufacture was brought to Europe. The missionaries of the Christian religion had successfully preached the Gospel in India, and had even penetrated into China. Two Persian monks, during a long residence in that country, had carefully considered the advantages which might accrue to the western world by the introduction of the insect itself, instead of the precarious and expensive importation of its produce. Their proposal was eagerly embraced by the enlightened Justinian; and after many attempts, and some danger, a sufficient number of eggs was en-

closed in the hollow of a cane, and successfully conveyed to Constantinople. Plantations of mulberries had been prepared: after some awkward attempts, silk enough was produced to show that a proper method had been adopted; the artists of Greece gradually approached perfection, and, in a few years, equalled or surpassed those of China. The ingenuity of the Arabs discovered the secret in the eighteenth century, and the manufacture was introduced in the dominions of the caliphs; but the profitable monopoly of supplying the Christian world was retained by the Greeks until the twelfth century, when the Norman Roger, after his conquest of western Greece (A. D. 1146), by an enlightened policy, most uncommon in that age, carried off among the prisoners a number of silk-weavers and spinners, whom he settled at Palermo. Sicilians were instructed in the process;—Italy soon acquired the valuable art;—and the manufacture has gradually spread itself over the western world. The artists of London now rival those of China, and under the superior management of Europeans the insect itself has improved. A healthy cocoon, which hardly ever equals a grain in China, has been known to weigh three grains in England, and the average of many thousands show a weight of more than two grains.

There is every reason to conclude that the silk-worm has been cultivated, and silk woven in China, from the most remote antiquity. As the necessity for clothing must have long preceded that of recording events, the inventions of the loom and distaff are lost in the uncertainty of tradition. The mythologists of the west have ascribed these inventions to the gods; and in like manner the ancient monarchs of China, who in their traditional history play the part of gods, are said to have been the inventors of the silk-manufacture. For nearly twenty centuries Europe has received silk from the East: the names given to it on its introduction sufficiently indicate the country from which it came. The Greek name *Σηρ* resembles the word implying silk in most of the Chinese dialects, and is identical with the pronunciation of *Corea seer*; in the mandarin dialect it is pronounced *sze*; but in a language of which the written character affords no indication of sound, the pronunciation must be as varied as in those savage tongues which are not at all committed to writing. The Latin name sufficiently resembles the Manchoo and Mongol *sirke* and *sirkek*, to show the people by whom the silk was carried on its departure from China. Those names, altered perhaps in their long journey over central Asia, acquired from the cultivated organs of the Italians the more agreeable form of *serica*, by some modification of which it is still known in most of the languages of Europe.

In ancient times an example of industry was annually given by the empress of China, who fed the laborious insects with the leaves she had gathered with her own hands, from trees growing within the verge of the imperial palace. The produce of the worms was afterwards spun and woven by herself. This was a politic mode of inducing habits of industry; and it appears to have been retained, on account of the pleasing nature of the occupation, long after the necessity of example had ceased. Since the accession of the present family the custom has been discontinued: a part of the palace is, however, still stocked with insects and mulberry-trees for the amusement of the royal ladies; and the government has not neglected the manufacture. Treatises of considerable extent have been published to point out the best mode of rearing worms and managing silk, showing in complete detail the best method of preserving and of hatching the eggs and feeding the worms, the diseases to which they are subject, and the modes of prevention and cure; the best form of building, and manner of warming and ventilating their habitations,

and every other particular. The precautions recommended, although not rigorously adopted by every manufacturer, have greatly tended to improve the quantity and quality of the produce.

During the fine season, worms are reared and silk made in almost every house, and any spare room is used for their habitation; but by those who make the rearing of worms a profession, a dry airy spot is chosen, free from pungent smells and loud noises: a square room is built with the entrance if possible towards the south. It is usual to have a window on each side covered with white paper to exclude the air, and provided with thick blinds to shut out the light when darkness is necessary. A stove, or more, is furnished to keep up a constant and equal temperature throughout the room, and to prevent any chance of damp, which is very injurious to the worm. Around the room several rows of shelves are fixed, one above another, about a foot apart,—not against the wall, but leaving a clear passage, wide enough for a person to walk outside all round the room, and an open space in the middle. These shelves are formed of rushes or withies, and are intended to receive the worms when hatched. The hatching may be accelerated or retarded at pleasure by exposing the eggs to heat or cold; and the usual practice is to keep them in a cold place until the mulberry-trees have put forth their young leaves: the paper on which the eggs are deposited is then brought out, and hung up in such a situation that the sun may shine on the back of the sheets; this is repeated for two or three days, during each of which the paper is allowed to remain exposed to the rays of the sun only long enough to acquire a gentle warmth: a great heat would be very prejudicial. On the fourth day a great number of the eggs will be hatched. All the worms which leave the eggs before this time are thrown away, as they would not agree with the others in the times of eating, casting their skin, or spinning, which would be the cause of much additional trouble to the attendants. The papers are then carefully weighed, turned upside down, and gently placed upon young mulberry-leaves, cut into small shreds to be more easily masticated by the tender worms. The smell of the fresh leaves soon induces the worms to leave the paper, which is again carefully weighed; the weight of worms is of course known by the difference of the present and former weights, and the quantity of food regulated accordingly*.

In the first days of their existence the Chinese worms are fed nearly every half hour, and the number of meals is gradually diminished, as the worms grow older. After a few days they are fed four times a day, and the leaves are no longer shred, but given whole as they are gathered; after this the number of meals suffers no diminution†.

The daily process of feeding the worms is very carefully attended to; they are kept free from noise, bad smells, or other causes of annoyance; and in some places even the food and dress of the attendants are scrupulously regulated. Small stoves are used occasionally for drying the air of the apartment during the prevalence of damp weather: shades are placed over the windows when the heat of the sun would be excessive; in case of a drying wind, small vessels of water are interspersed between the shelves to refresh the air of the room; if the worms appear sickly and

* The Italians usually procure the deposition of eggs upon cloths, from which they are detached by washing. The eggs are then kept in little bags, in as cool a place as possible, until the mulberry-trees are in leaf, when they are hatched in a stoved room, of which the heat is gradually raised from 65° to 80° of Fahrenheit. The process usually occupies twelve or fourteen days.

† In Italy it is usual to feed the worms four times a day from the first; when very young they receive chopped leaves, and in about sixteen days the chopping is discontinued.

heated, a fine powder of dry mulberry leaves is thrown over them; in short, every precaution is taken which the interest of the proprietor may suggest, or the delicate habits of the animal may seem to render necessary.

Notwithstanding every precaution, the worms sometimes die, particularly at the time of moulting, or casting their skin. This is a season of danger which occurs three times during the short life of a silk-worm. In the fourth day of its existence it falls sick, refuses food, and is then said by the Chinese to sleep: within twenty-four hours it casts its skin with much apparent pain; two days usually elapse before health and appetite return, and after two days of health a second sleep approaches; the pain and danger is repeated, and after an equally short interval of health, the third and last sleep attacks the laborious insect. When this sleep is completed, the worm enjoys a longer interval of health than at any other period: for five or six days it continues to eat heartily, and then begins to spin the "golden tomb," to the formation of which its whole existence appears consecrated.

The silk-worm of Europe has one step of danger more than that of China, and casts its skin four times instead of three. It is the opinion of some naturalists that this difference must be the effect of climate; but such a supposition is negatived by the fact that the silk-worm of three casts, like that of China, is known in Europe, and that in some districts of Lombardy it is reared as well as that of four casts, though the latter is preferred from the larger quantity of the produce. The worm of four casts being the best known in Europe, was probably the species introduced by Justinian; the smaller sort was most likely imported in one of the many vessels which have sailed between Europe and China for nearly four centuries. Both species are cultivated in Bengal, and are both thought by the Hindoos to have been brought from China. The smaller sort is known there by the name of the monthly worm, and can be brought to spin eight or ten times a year; the other is called the annual worm, and produced silk in March only*.

SEBASTIAN CABOT.

SEBASTIAN CABOT, a maritime discoverer of great eminence, who, in all probability, was the first European who reached the main land of the New World, was born in Bristol about the year 1477. His father, Giovanni Gabota, or John Cabot, as he is usually called, was a Venetian adventurer†, settled in Bristol, who obtained the notice of Henry VII. during the arrangement of a treaty with the King of Denmark, by which Bristol was considerably benefited. Sebastian Cabot was instructed by his father in the various branches of nautical science as it was then taught, and before he had attained the age of seventeen he had been to sea several times. But the first voyage of any importance in which he bore a part, appears to have been when he accompanied his father for the discovery of unknown lands with the hope of finding a north-west passage to India. The discoveries of Columbus, who returned from his first expedition in 1493, having attracted the attention of Europe to the New World, on the 5th of March, 1495, John Cabot received letters-patent from

* The Bengal worm has degenerated of late years, and several attempts have been made to introduce a better breed, by bringing eggs from the N.W. provinces of China, whence the first silk-worms were sent to Europe. These attempts have failed; the annual worm (chosen as the best sort) has in a short time changed its distinctive character, and become monthly. Attempts are now making by the East India Company to convey the European eggs to Bengal, by first naturalizing the breed on the island of St. Helena, all their endeavours to convey the eggs direct to Bengal having failed.

† According to Stowe and Grafton, John Cabot was a Genoese.

Henry VII., directed to himself and his three sons,—Lewis, Sebastian, and Sancius,—authorizing them to "saile to all parts, countreys, and seas of the east, and of the west, and of the north." They were to subdue and occupy all towns, cities, castles, and islands for the king, who reserved to himself a fifth part of the profits of the voyage after the payment of all expenses; and they were directed to return to the port of Bristol.

Cabot did not set out on this voyage for some time afterwards; for we find that, on the 3rd of February, 1497, Henry VII. gave him license to take six English ships, of the burden of 200 tons, or under, and as many mariners as were willing to go with him. One ship, in which some merchants of London were interested, was equipped at Bristol at the expense of the king. She was attended by four small barks, fitted out by the merchants of that city, and laden with "coarse cloths, caps, lace-points, and such other." John Cabot, accompanied by his second son Sebastian, sailed in the spring of that year (in a manuscript calendar of the city of Bristol 1499 is the year mentioned), steering to the north-west, in the hope of reaching India by a shorter course than that which Columbus had taken, and of reaching the coast of *Cathay*, or China, of the fertility and opulence of which the descriptions of Marco Polo had excited high ideas. After sailing for some weeks due west, and nearly on the parallel of Bristol, they made the discovery of Newfoundland. The day on which this occurred is known by a map drawn by Sebastian Cabot, and cut by Clement Adams, which hung in the Privy Gallery at Whitehall. Under the author's picture was this inscription, "Effegies Seb. Caboti, Angli Filii Jo. Caboti, Venetiani, Militis Aurati," &c. On this map was likewise a narrative of the discovery, the original of which was in Latin, and which, as well as the following translation, may be seen in 'Hakluyt,' vol. iii., p. 27. "In the yeere of our Lord 1497 John Cabot, a Venetian, and his son Sebastian, with an English fleet, set out from Bristol, and discovered that land which no man before that time had attempted, on the 24th of June, about five of the clocke, early in the morning. This land he called *Primavista*, that is to say, first seene, because, as I suppose, it was that part whereof they had the first sight from sea. That island which lieth out before the land he called Island of St. John, upon this occasion, as I thinke, because it was discovered upon the day of John the Baptist. The inhabitants of this island used to weare beasts' skinnes, and have them in as great estimation as we have our finest garments. In their warres they use bowes, arrowes, pikes, darts, wooden clubs, and slings. The soil is barren in some places, and yeeldeth little fruit, but it is full of white beares and stagges, far greater than ours. It yeeldeth plenty of fish, and those very great, as seales, and those which we commonly call salmons: there are soles also above a yard in length, but especially there is a great abundance of that kinde of fish which the sauages call baccalaos (codfish). In the same island also there breed hauks, but they are so blacke that they are very like to rauens, as also their partridges and eagles, which are in like sort blacke."

Having brought away three of the natives, Cabot proceeded westward, and soon reached the continent of North America, sailing along it from the fifty-sixth to the thirty-eighth degree of latitude, from the coast of Labrador to that of Virginia, till he came to Florida. It does not appear that he landed anywhere during this extensive course, and he returned to England without attempting either settlement or conquest in any part of that continent, though he returned with a good cargo. The accounts of this voyage are in some measure involved in obscurity, and it is conjectured that Sebastian Cabot made some voyages without his father in the reign of Henry VII.; for during a period of nearly twenty years, no authentic detail of his life or

proceedings is extant. Nor is it known at what time or in what place his father died. No further attempt at discovery was made in England in the reign of Henry VII., and we hear no more of Sebastian Cabot till 1516, when he became connected with Sir Thomas Pert, then vice-admiral of England, who obtained a king's ship for the purpose of making discoveries. Sebastian Cabot seems at this time to have intended to proceed to India by the south; for he sailed first to Brazil, where, failing of success, he steered for the islands of Hispaniola and Porto Rico. The design of Cabot was by various accidents completely frustrated. It is supposed that this disappointment disposed him to leave England and enter the service of Spain, where he was appointed *piloto mayor*, or grand pilot; and by the nature of his office he was intrusted with the review of all projects of discovery, which at that time were numerous and important. His great ability and reputation induced several opulent merchants to negotiate with him in 1524 concerning a voyage to be made at their expense by the new-found passage of Magelhaen to the Moluccas; and Cabot sailed from Cadiz on this expedition, (of which there is an account in the Spanish historian Herrera) with four ships, in the early part of April, 1525.

The dearth of provisions and a mutiny among his men prevented the completion of his original plan, of going to the Spice Islands. He sailed up the Rio de la Plata (river of silver), where he found an island about a league in circumference, and half a league from the continent towards Brazil, which he called St. Gabriel. Here he anchored, and taking the boats three leagues further, he discovered a river, which he called San Salvador, or St. Saviour. Finding it deep and a safe harbour for ships, he brought up his vessels and unloaded them, because there was a deficiency of water at the mouth of the river; he left a few men in a fort that he had built, and continued his course up the river with boats and a flat-bottomed caravel, in the hope that his voyage might not be altogether fruitless.

After various adventures, in which he was occupied nearly five years, he embarked the remainder of his men and all his effects in the largest of his ships, leaving the rest behind him. In the spring of 1531 he arrived at the Spanish court, where, apparently, he was not very cordially received; for his treatment of his Spanish mutineers had made him many enemies, and the merchants were dissatisfied that he had not gone to the Moluccas. He, however, retained his place, and continued some years in the service of Spain, till his return to England, which is supposed to have been about the close of the reign of Henry VIII. In the commencement of the reign of Edward VI., Cabot was introduced to the Duke of Somerset, then lord protector, who received him with great consideration, and presented him to the king.

On the 6th of January, 1549, he was constituted Grand Pilot of England, and received a pension for his life of 166*l.* 13*s.* 4*d.* a-year. In this year, according to Strype, (Memorials, vol. ii.,) the emperor, Charles V., desired that the king should send Cabot to him, as he could be of little service to the English, who had not much to do with the Indian seas, and as he was his servant, in the capacity of grand pilot of the Indies; but this application was not complied with. Cabot continued high in favour with Edward VI., and his advice was sought on all matters relative to commerce, and especially in the important business of the merchants of the Steelyard in 1551. These merchants, who were originally from Germany, had settled in England in or before the reign of Henry III. They imported various merchandise, among which was steel, from which their residence acquired the name of the Steelyard. They had been encouraged by many privileges, which, as the English trade increased, proved a source of annoyance.

On the 29th of December, 1551, the Company of Merchant Adventurers, at the head of whom was Cabot, exhibited an information to the Privy Council against them, and, after several hearings, they were declared not to be a legal corporation.

As a communication with China and the Spice Islands by some other route than that of the Cape of Good Hope continued to attract the attention of the English, Cabot, whose opinion was of great weight, urgently pressed them to make another attempt, which he proposed to be north-east; and he supported this advice by such reasons as to excite sanguine hopes of success. Several persons of rank and eminent merchants formed an association, which was incorporated by a charter from the King as "The Company of Merchant Adventurers for the Discovery of Regions, Dominions, Islands, and Places unknown;" and Cabot, appointed governor of this company, soon prepared two ships and a bark, which he furnished with instructions from himself, which bear date the 9th of May, 1553. These instructions, which were to be read once a week to the ships' companies, may be seen at length in Hakluyt, vol. i., p. 251; and they afford the clearest proofs of Cabot's naval skill and mercantile sagacity: The following curious passage occurs in them:—"And if any person [of the natives] taken may be made drunke with your beere or wine, you shal know the secrets of his heart." In consideration of his trouble on this occasion, the king granted him 200*l.* There is so much variation in the accounts and dates respecting this voyage, that it has been supposed that they apply to two different voyages; but on the other hand, it appears that there is no distinct relation of any other attempt in the northern seas except this under Sir Hugh Willoughby, the result of which was the trade to Archangel in Russia.

Cabot took an active part in the transactions of the Russia Company. In the journal of Stephen Burroughs, (Hakluyt, vol. i.) it is stated that on the 26th of April, 1556, he went to Gravesend; and when on board the Serch-thrift, a small vessel fitted out for Russia, under the command of Burroughs, he gave to the "mariners right liberal rewards," and on his return to Gravesend he generously bestowed alms on the poor, wishing them to pray for the prosperity of the voyage. On this occasion he made a banquet at the sign of the Christopher at Gravesend, where, as Mr. Burroughs says, "for the very joy he had to see the towardness of our intended discovery, he entered into the dance himself," and in further evidence of his excellent qualities, we find in the 6th chapter of the third Decade, that Peter Martyr says "Cabot is my very friend whom I vse familiarly, and delight to have him sometimes keepe mee company in mine own house." The renewal of his patent is the last information that we possess of this remarkable man, who is supposed to have died some time in the following year, when he was probably nearly eighty, though his age has not been accurately ascertained. By his biographers Cabot is asserted to have been the first who made the important discovery of the variation of the compass; but in Irving's 'Life of Columbus,' (vol. i. p. 201) it is stated that when 200 leagues from Ferro, on the 13th of September, 1492, "Columbus for the first time noticed the variation of the needle, a phenomenon which had never before been remarked," and this occurred at a period before Cabot could, from his tender age, have made the discovery.

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BIRMINGHAM.—No. II.



[Trinity Chapel.]

Our last Supplement was chiefly devoted to a general sketch of the antiquity and early history of Birmingham and its manufactures. In resuming the subject,

Vol. V.

we shall endeavour to make the reader acquainted with Birmingham in its present state.

Few events calculated to interest the historian have

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occurred at Birmingham. Every one, however, has heard of the riots which took place there in 1791; and as they furnish an instructive lesson of the madness of party and the consequences of ignorance they may be briefly alluded to. The breaking out of the French Revolution occasioned in this country hopes and fears equally unfounded when carried to excess, as they frequently were, by bigoted or over-zealous individuals. The excitement into which the former were thrown prevented them from distinguishing the good from the bad in the institutions under which they lived: the latter class of persons indulged in expectations of a period of happiness and liberty altogether inconsistent with the existence of society. While these were the views under which the most violent partizans acted, the more sober portion of the community were in extreme agitation, and in this unhealthy state of public opinion, a trivial circumstance was calculated to produce much feverish and unwarrantable alarm among those whose views were not sufficiently clear-sighted to perceive the true nature of the events which were taking place around them, and who did not possess the wisdom to direct their consequences to useful ends. At this period there resided at Birmingham Dr. Priestley, who was a distinguished man of science and a divine of Unitarian sentiments. This individual looked with hope to the spread of liberal sentiments being hastened by the great movement which was taking place in France. Writing to one of his friends, he said, "We are, as it were, laying gunpowder, grain by grain, under the old building of error and superstition, which a single spark may hereafter inflame, so as to produce an instantaneous explosion; in consequence of which that edifice, the erection of which has been the work of ages, may be overturned in a moment, and so effectually as that the same foundation can never be built upon again." By some means the above passage was made public, and it had the effect of exciting the enmity of all who clung, from a feeling of veneration, to the old institutions which they saw menaced. The transition was easily made from a defensive to an offensive position; and it was not long before the occasion arose for such a change being effected.

The 14th of July, 1791, being the second anniversary of the taking of that old fortress of despotism, the French Bastile, was fixed upon by one of the parties into which the town was divided as a day of rejoicing, and it was determined to celebrate it by a public dinner. The other party also resolved upon a counter display, and they, with very different sentiments, also resolved to get up a public dinner on the same day. A number of persons congregated during the evening around the head-quarters of each party;—rumours circulated among them, which they were too unenlightened to see the folly of, and they made an attack upon the house in which the party friendly to the French Revolution were assembled. The windows were soon demolished, and the rooms were searched by the rabble, who entered in the hope of laying hold of Dr. Priestley; but he had not attended the dinner. The multitude then proceeded to the chapel in which he was accustomed to officiate, and in half an hour it was in flames. Afterwards they set out for Dr. Priestley's residence, which was about a mile out of the town: they gutted it of the furniture, books, philosophical instruments, and manuscripts, on which he had spent some of the most valuable portion of his life.

On the following day (Friday, July 15th), a number of the respectable inhabitants assembled in St. Phillip's Churchyard to be sworn in as special constables; but they were but imperfectly organized, and the civil authorities did not display sufficient energy for the occasion. The mob, therefore, recommenced the work of destruction, but were at one time dispersed by the

special constables. They however rallied again, and in a second attempt to disperse them one of the special constables was killed. No military force being present, the mob went on to exercise their mischievous power uncontrolled. About 10,000 of them proceeded to the house of Mr. Ryland, at Easy Hill, and the premises were soon in flames. The wine-cellar was broken open, and many of the besotted rabble became intoxicated with its contents, and were in it when the roof and heated ruins fell to the ground. This day the places in which persons were confined for crime were broken open, and the inmates liberated. Barrels of ale were broached in the street before the houses of respectable persons who wished to propitiate the favour of the capricious body into whose hands the town had fallen. Mr. Hutton was one of those who had placed a barrel of ale before his house to regale the mob. When it had been emptied, they proceeded to drag him out of the house, and compelled him to give them money, and, not content with his compliance, they confined him in a public-house until they had drunk 329 gallons of ale at his expense, and afterwards exhibited their good faith towards him by destroying everything in his house to the minutest article. The rioters closed their proceeding this day by the destruction of Bordesley Hall, the residence of John Taylor, Esq.

On Saturday the work of havoc was resumed. The house of Mr. Hutton, at Bennett's Hill, and that of Mr. Humphries, were first destroyed. At the latter place it was determined to make some defence, but the idea occasioned so much alarm among the female part of Mr. Humphries' family that it was abandoned. As the family made their escape from the house the mob entered it, and the work of destruction was speedily completed. At the house of Mr. W. Russell, at Showell Green, another attempt was made to withstand the mob, but without success. During the day the houses of Mr. Hawkes, Lady Carhampton, Mr. Hobson, Mr. Pidarek, Mr. Harwood, and Mr. Coates, were destroyed.

On Sunday morning the work of mischief was resumed by an attack on the house and chapel of Mr. Cox, at Wharstock. The contents of the cellar were first drunk, and the house and premises were then set on fire, the mob waiting to see that the ruin was complete; after which they disposed of the meeting-house and parsonage-house of Kingswood in a similar manner. They then proceeded to Edgbaston Hall, where they displayed their usual fury. At ten o'clock in the evening, three troops of cavalry had arrived at Birmingham, and on this intelligence being communicated to the rioters they discontinued their lawless operations. They did not, however, at once disperse, but, forming themselves into small bodies, levied contributions on hamlets and farm-houses, until finally the country people collected together in their own defence and dispersed the ruffians.

It is quite immaterial under what watchword a body of men carry on a series of outrages on the persons and property of their fellow-citizens. The folly and wickedness of such acts can in no way be diminished or rendered less conspicuous thereby. Forty-five years ago the Birmingham rioters plundered their fellow-townsmen in the name of "Church and King;" and five years ago the city of Bristol was in the hands of a mob equally ignorant and foolish, whose rallying cry was exactly the reverse of that of the Birmingham rioters of 1791. In both cases the lamentable proceedings which took place were the results of ignorance of the most fatal description.

All men have so strong an interest in the security of property, that its possessors will never be long in aiding each other when it is forcibly attacked. However surprise or want of energy may paralyze them for

the moment, a community whose best interests are in jeopardy soon assumes a defensive position. The shameful perpetrators of violence then find that their own interests have suffered not less severely than those of their injured neighbours, although in a less direct manner. During the riots at Birmingham, three of the persons who sustained the greatest damage to their property employed in their several concerns many hundred persons, who would be thrown out of employment by the derangement which such events occasion in manufacturing and commercial establishments. After a considerable interval all those whose property had been injured by the rioters recovered damages from the county to the extent of 26,961*l*.

Dr. Priestley, whom the rioters thought to have seized when they first commenced their proceedings, fortunately made his escape from his house with his wife and family. Before quitting his residence the fires were put out, in the hope that the mob, not finding immediate facilities for destroying the house, might be induced to relinquish the idea. This precaution, however, had not the desired effect, and the laborious task of hewing and tearing the house to pieces was quickly begun. Dr. Priestley first retreated to Worcester, and afterwards to London, where he was appointed to succeed Dr. Price, as the pastor of a congregation at Hackney. He finally quitted his native land in 1794, for America, where he purchased 200,000 acres of land on the banks of the Susquehannah, about 120 miles from Philadelphia. Here he spent the remainder of his days in retirement, not undisturbed by domestic sufferings. In 1796 his wife died of a fever, and his second son was shortly afterwards cut off by the same malady. Dr. Priestley died February 6th, 1804, in the 71st year of his age. A tablet of white marble, with a suitable inscription, was erected to his memory at Birmingham by the congregation over which he had presided.

Birmingham does not possess any buildings remarkable for their antiquity. The church of St. Martin, which stands at the edge of the town, on the London side, is doubtless the most ancient building in the town, though no precise date can be fixed to the period of its erection. The spire is finely proportioned, but both the tower from which it springs, as well as the body of the church, were encased in brick-work in 1690, and are therefore more remarkable for their singular appearance than anything else. The spire, however, was not thus disfigured, but was taken down in 1783 to the extent of forty feet, and rebuilt to its original state with a durable stone from the neighbourhood of Nuneaton. In the interior of the spire there is an iron shaft 105 feet in length, which is secured to the masonry by iron braces at intervals of ten feet. The tower contains twelve musical bells. The attempts to "beautify" this church do not appear to have been well managed, as the principal monumental memorials of the ancient lords of Birmingham were destroyed when the exterior of the edifice was repaired. The successive erection of galleries to provide sittings for the increasing inhabitants, occasioned alterations to be made which have caused them to be still further mutilated or removed.

The increase of the town occasioned the erection of another church (St. Phillip's) in 1715, and this was surrounded by a cemetery of four acres in extent. The church of St. Phillip is of the Corinthian order, and is placed on the summit of a hill, and the dome and cupola with which it is surmounted are therefore conspicuous objects. The triennial musical festivals for the support of the Birmingham General Hospital were held here from their commencement in 1778 to 1829.

St. John's Chapel, Deritend, on the south side of the Rea, was erected in 1735, and the tower, in which are eight bells, twenty-seven years afterwards. St.

Bartholomew's Chapel, on the east side of the town, was built in 1749, and St. Mary's in 1774. St. Paul's was erected in 1779, from a design by Godwin; the steeple was not completed until 1823. St. James's Chapel, Ashted, was consecrated in 1810. Christchurch was begun in 1805, but was not completed until 1816: it contains an excellent organ. St. George's, erected in 1822, is a Gothic edifice, with a lofty tower in the style of Edward III. The dimensions of the interior are ninety-eight feet by sixty, and it possesses accommodations for nearly 2000 persons. The internal decorations and arrangements are executed on a superior scale. The height of the tower to the top of the pinnacles is 114 feet. Trinity Chapel, in the hamlet of Bordesley, is likewise from a Gothic design. A representation of Christ at the Pool of Bethesda adorns the altar. St. Peter's Chapel, Dale-end, is in the Grecian style of architecture. It was finished in 1827, but the interior was destroyed by fire in 1831. St. Thomas's, also in the Grecian style, stands on an eminence called Holloway Head, and was consecrated in 1829: the height of the tower is 130 feet. The dimensions of the interior are 130 feet by 60. The ceiling is enriched with highly ornamental pannels, and is thirty-eight feet from the floor. This church possesses accommodation for more than 2000 persons. All Saints, on the road to Soho, was consecrated in 1833, and is a brick structure with stone pinnacles.

Birmingham not being a corporate town naturally attracted many of the old non-conformers, who were prevented in less liberal times from residing within five miles of such privileged places. The number of places of worship for the various bodies of Dissenters is therefore large, and we believe not fewer than forty-five.

The public buildings of Birmingham for municipal or other useful purposes may now vie with those of any other town in the country, and the magnificent Town-hall is not paralleled by any of them. The view of New Street does not present all the fine edifices which it contains, some being excluded by the nature of the view, and others being only partially visible. The theatre, the portico of the Society of Arts, Radenhurst's Grand Hotel, with its elegant colonnade, are all in New Street. In an adjoining street a news-room has been erected, ornamented by lofty pillars of the Ionic order. The Market Hall is an ornamental as well as most useful building, 365 feet in length and 108 feet wide. On the north front is a façade of the Doric order, sustaining an entablature, which is continued round the other sections of the buildings. Twelve spacious entrances afford convenient means of access from the principal streets of the neighbourhood. The roof is divided into three compartments, supported by two ranges of ornamental iron columns, twenty-eight feet high. The Town Hall, the most striking public building in Birmingham, has already been described in No. 142 of the 'Penny Magazine.' A description of the organ which it contains, and which is perhaps the finest in Europe, has also been given in the 'Penny Magazine,' No. 167. Cuts both of the Town Hall and the organ accompany the descriptions of each in the Numbers of this work already mentioned; to those we must refer the reader.

The Grammar School, now rebuilding in the Gothic style, with extensive cloisters under it, a spacious library and residences for the head master and assistants, will be one of the finest buildings of the kind in the kingdom when completed. The Post-office, the offices of the different banking companies, the Police-office, and other edifices for public purposes have been erected with much spirit and taste, and would adorn any capital in Europe. The cemetery on the Wolverhampton Road presents similar architectural features to the metropolitan cemetery in the Harrow Road.

In 1801 the population of Birmingham and the suburbs was 73,670, and it was only exceeded in this respect by Manchester, Glasgow, and Liverpool. In 1811 the population of Birmingham had increased to 85,753; in 1821 to 106,721. At the census taken in May, 1831, Birmingham contained 69,415 males and 72,836 females, making a total population of 142,251. It still held the rank which it occupied when the census of 1801 was taken; and though it had not increased in so rapid a manner, its progress had been more steady. From 1801 to 1811 the increase was 16 per cent., and for the two following decennial periods it was 24 and 33 per cent. respectively. The following is a table of the number of baptisms, burials, and marriages registered in Birmingham for the ten years ending in 1830:—

Years.	Baptisms.	Burials.	Marriages.
1821	2998	1775	1193
1822	5523	1764	1181
1823	2790	1943	1321
1824	3058	2178	1582
1825	3283	2242	1832
1826	2777	2235	1366
1827	3568	2084	1463
1828	4749	2310	1525
1829	4313	1941	1474
1830	4472	2138	1571

The number of persons who died above the age of 95 during the above ten years was forty-eight, of whom there were eleven aged 98; six aged 100; four 101; two 102; four 103; two 104; one 109; and one aged 114. The rate of mortality among children under five years is .44 per cent., *i. e.* less than one-half, and somewhat fewer than in the towns of Liverpool, Nottingham, and Leeds, where the proportion per cent. is respectively as follows:—Liverpool .46 per cent.; Nottingham .48 per cent.; and Leeds .49 per cent. The longevity of the inhabitants is remarkable, as will be seen by the following statement:—Proportion of deaths per cent., from 1821 to 1830, of persons aged between 90 and 99:—Birmingham .90 per cent.; Hull .96; Halifax .98; Somersetshire .96; Dorsetshire .98. The longevity of the inhabitants of Birmingham exceeds even that of the county population, the proportion in the latter case being .95 per cent., and at Birmingham .90. The result to which the above facts point will be evident to every one.

A striking idea may be formed of the wants of society in the present day, and of the manner in which they contribute to stimulate industry and direct the ingenuity and skill of the manufacturing population into an immense variety of channels by the following detailed list (taken from the Population Returns of 1831) of the branches into which the staple trade of Birmingham is divided:—

Makers of anvils 5; augers 1; awl-blades 7; bayonets 1; beer-machines 2; bellows 4; bellows-pipes 7; blacking 1; bolts 5; bone-toys 3; brace-bits 3; bottle-jacks 2; braces 8; brass-cocks 1; braziers 7; bridle-bits 18; bridles 5; Britannia tea-pots 51; bronze 1; buckles 10; burnishers 2; buttons 646; cabinet-locks 3; candlesticks 4; casters 94; casting-pots 3; chasers 29; clock-dials 4; clock-work 2; coach-lace 1; coach-springs 7; coach-founders 5; coffin-furniture 2; coral-carver 1; corkskrews 3; currycombs 1; die-sinkers 60; dirt-washer 1; dog-collars 4; edge-tools 8; enameller 1; fenders 17; files 55; filers 6; fire-irons 21; fishing-rods 1; floor-cloth 3; forgers 14; frying-pans 7; gas 3; gilders 15; gilt-toys 255; gimbets 25; girth-springs 1; glass-blowers 16; glass 7; glass-pinchers 3; glass-boys 24; gold-cutler 1; goldbeater 18; gold-plater 1; grinders 15; gauge-plates 1; gun-barrel filers 4; gun implements 19; gun-lock filer 1; hinges 19; horn-presser 1; iron-filers 4; iron-plate workers 6; key-maker 1; lanterns 1; lock-filers 3; lock-smiths

113; machines 2; malt-mills 12; mathematical instruments 16; metal-rollers 11; metal tea-pots 1; military ornaments 2; miniature-frames 1; modellers 7; needles 2; paper trays 1; patent cards 1; patent sashes 5; pearl-workers 3; pewterers 5; picture-frames 2; pins 9; pistol-finisher 1; planes 26; platers 616; polishers 7; pot-ash 1; refiners 20; repairer 1; ring-turners 4; rollers 3; ruler-makers 55; saddle-trees 1; saddlers' tools 1; saw-handles 2; saws 7; scale-beams 25; Scotch snuff-boxes 1; screws 27; similorer 1; snuffers 40; solder 2; spades 6; spectacles 16; split-rings 5; spoons 67; spurs 2; stampers 94; steel-toys 171; steelyards 2; stirrup-filers 6; strikers 2; sword-cutlers 8; tarpaulins 4; tea-trays 21; tea-urns 11; thimbles 9; thread 2; tools 79; tortoise-shell workers 7; toys 13; traces 2; Tutania (Tutenag) tea-pots 6; varnish 2; vices 6; violins 1; waiters 4; watch-glasses 1; watch-hands 2; watch-pendants 1; watch-pinions 2; watch-springs 1; weavers 19; web 1; white-metal smith 1; wire-drawers 150; workers in copper and brass 34; workers in iron and steel 37.—Total 3415. At Aston: makers of anvils 1; awl-blade 27; bellows 10; brass-founders 576; Britannia metal 8; buckles 3; buttons 158; carpets 1; coffin furniture 15; edge-tools 24; fenders 38; files 33; frying-pans 8; gilt toys 16; gimbets 16; glass 132; hinges 34; latches 1; locksmiths 59; machines 3; malt-mills 6; needles and fish-hooks 5; pewterers 10; pins 4; planes 6; rulers 18; saws 19; screws (wood) 27; snuffers 6; spades and shovels 1; spoons 36; steel toys 120; steelyards and scale-beams 17; thimbles 17; thread 3; traps (mouse and rat) 3; vices 2; weavers 5; wire 87. Total 1555. At Edgbaston: brass-founders 8; button-makers 6; coach-springs 1; files 2; gimbets and braces 2; glass 3; hackles 2; iron 6; locksmiths 4; platers 7; polishers 2; press-nails 1; rollers of metal 2; screws 1; spectacles 1; spoons 2; vinegar and starch-makers 3. Besides this specification, which produces a total of more than 5000 men, a number not much less appears in the Birmingham return as *handicrafts*—brass-workers, gun-makers, jewellers, whitesmiths, glass-cutters, japanners, silver-smiths, and toymen.

The number of families employed in trade, manufactures, and handicraft is 19,469; in manufacture, or in making manufacturing machinery 5028; and the families of capitalists, bankers, professional and other educated men are 2388. Add to these 5292 day-labourers employed in various ways, but not in agricultural labour; 966 male servants, and 5233 female servants; and it will be at once seen that Birmingham is well entitled, both on account of its population and industry, as well as its intelligence, to the designation of the Midland Metropolis.

The population of Birmingham comprises more than two-fifths of the population of the county of Warwick. The criminal returns for the county will therefore enable us to form an approximate idea of the morality and habits of order which prevail in Birmingham. In the returns published in the 'Companion to the Almanac' for 1836, the proportion of offenders to the population in Warwickshire is 1 in 510. The population to the square mile is 357, and the opportunities of crime are necessarily great amid a population so active and flourishing. In Hereford the proportion of criminals is exactly the same; but the population to the square mile is only 121, and the temptations to crime less frequently present themselves. The counties of Chester, Lancaster, Surrey, and Middlesex, contain a greater number of criminals in proportion to their population than Warwickshire does; and counties which contain a smaller proportion, have, it must be remarked, a much smaller amount of town population.

A savings' bank was established at Birmingham in



[New Street.]

May, 1827, which, in November, 1829, contained 43,881*l.*, and had opened accounts with 2499 depositors. In the five savings' banks established in the county, 5755 depositors had put in their earnings, and the amount of each deposit averaged 28*l.* 19*s.* 2¼*d.* For the year ending 1833 the number of depositors in the Warwickshire savings' banks was 6580; but we have no means of distinguishing the number of those who reside in Birmingham. These valuable institutions appear to have been established at a late period in Birmingham, at least ten years after their being instituted in most of the other large towns in the country.

We have much pleasure in noticing the manner in which Friendly Societies are supported at Birmingham. We learn that upwards of 400 of these excellent institutions are established, and it is supposed that about 40,000 of the inhabitants are enrolled in them. The system of holding the meetings, depositing the chests, and transacting the business at public-houses is, we rejoice to hear, on the decline, to the evident advantage of the members.

The General Hospital claims the first notice among the benevolent institutions of Birmingham. It was commenced in 1776, but for want of adequate funds the work was not finished before 1778. It cost 7137*l.* Two wings were added in 1791, at an additional cost of upwards of 3000*l.* The subscriptions and donations to this noble charity have been progressively aided by the profits of the celebrated Birmingham Triennial Musical Festivals. The net produce of the first of these festivals, in 1778, was 127*l.* The gross receipt of that of 1829 was 9771*l.*, and the net produce 3806*l.* The gross receipts in 1834, (being the first of the musical festivals in the New Town Hall,) were 13,278*l.*

The Dispensary was established in 1794, and the present building, in Union Street, erected in 1808, at the cost of 3000*l.* Three physicians and six surgeons give their services gratuitously, and such of the poor as cannot attend at the dispensary are visited at their own houses. There are two resident surgeons, an apothecary and midwife. No recommendation is required for

vaccine inoculation, which is gratuitous on Mondays and Thursdays.

Besides these benevolent institutions there is a Fever Hospital, an Institution for the Relief of Bodily Deformity, an Infirmary for the Diseases of the Eye, and a Magdalen Asylum. There are musical performances at Christmas, in the Town Hall, at which the performers act gratuitously, for the benefit of distressed housekeepers.

The education of youth has received so much attention in Birmingham, that a history of its schools would make a voluminous work. The Twentieth Report of the Commissioners for inquiring into Public Charities, dated July, 1828, contains 114 closely-printed folios, which are devoted to the charities of Birmingham. The General Grammar School of this town was founded in the 5th of Edward VI. (1552), "for the education, institution, and instruction of boys and youths in grammar." The school was endowed by the king with the lands and other property of the dissolved religious foundation called the Guild of the Holy Cross, to be held in common soccage, at 20*s.* per annum. The government of the school and the management of its revenues were invested in twenty discreet men of the township, at first nominated by the crown, and subsequently having the power of supplying the place of deceased members. They were constituted a body corporate, with power to hold or receive lands or other possessions of the king or other benefactors; to appoint the masters, and, in conjunction with the bishop of the diocese, to prescribe rules for the interior management of the school. Since the year 1676, a sum, more or less, has been set apart to furnish exhibitions for the more advanced pupils at Oxford or Cambridge; and subsequently to 1796, the number was ten, at 35*l.* each. The income arising from the estate of the charity is gradually on the increase. In 1827 it was about 3400*l.*, but from the expiration of old leases and the usual advantages of renewals, it has been calculated that by the year 1840 the income will be 9000*l.* The revenues in 1835 were 4000*l.*, and the expenditure below 3000*l.*

A chancery inquiry into the validity of some of the statutes relating to this foundation led to other inquiries respecting it, and the result was, a chancery decree, dated June 7th, 1830, ordering, amongst other things, that the learned languages should be taught under the direction of a head master and usher, each to be a graduate of Oxford or Cambridge, of the degree of M.A.; that the salary of such head master should be 400*l.*, with other contingent benefits, while that of the usher should be 300*l.*; each to have a residence, rent and tax free, and a retiring pension to the amount of half the salary. The head master and usher each to nominate his own assistant, subject to the approval of the governors, and the salary of such assistants to be 200*l.* per annum each. That a master to teach writing and arithmetic should also be appointed, with a salary of 100*l.* That no boy should be admitted under eight years of age, or who could not read and write; and that no youth should remain on the foundation after he had attained his nineteenth year. That for the education of the children of persons who were not inhabitants of Birmingham, payment was to be made according to such a scale of charges as the governors should authorize. That ten exhibitions of 50*l.* per annum each should be founded for the Grammar School boys going to Oxford or Cambridge; two exhibitions to be elected one year and three another, to be held for four years: but residence during terms to be indispensable. That there was to be an annual visitation and examination, both as to learning and proficiency in the Christian religion; and that there should be a library and a graduated scale of rewards to deserving pupils on leaving the school. Exceptions to this report were filed, but it was ultimately confirmed, and additional schools, with extended plans of public usefulness, have arisen in the town, supported by the parent institution.

The Blue Coat School was founded in the early part of the last century. The school-house was erected in St. Philip's churchyard in 1724, and considerably enlarged in 1794. The number of children of both sexes educated on this foundation is nearly 200, under the care of a committee of subscribers and of a governor and governess, both single, and members of the Church of England. The revenues of the institution, arising from rents of lands, premises, and funded stock, amounted in 1827 to 1029*l.* Additions being made by charity sermons, collections, and other benefactions, a revenue of 2000*l.* is generally made up, the whole of which is expended in the purposes of the institution. The trustees under the will of George Fentham, a mercer of the town, dated 1690, (who left property now producing about 308*l.* per annum, a portion of which to be applied to teaching poor boys and girls "to know their letters, spell, and read," and putting them out as apprentices), pay to the Blue Coat School, for boarding and lodging from fifteen to twenty of the objects of Fentham's bounty, the sum of 11*l.* per annum for each child, with an annual gratuity of 10*l.* to the master and matron for their extra trouble. These children are clothed once a year from the funds of Fentham's charity, and on attaining the age of fourteen are put out as apprentices.

At the Protestant Dissenters' Charity School 43 children are fed, clothed, and educated, from the age of nine to fifteen years. There is also in Birmingham a Deaf and Dumb Institution, which is supported partly by contributions from the public and partly by payments of 8*l.* per annum from the parents or friends of the children. There are about fifty children boarded and instructed in this excellent institution. The boys are taught the elements of useful education, and assist in gardening; and the girls are taught sewing, knitting, and household work, and also receive instruction in the usual elements of school education.

In the town and suburbs there are twelve infant schools. The St. George's School, commenced in 1823, is attended by 120 children; the St. Mary's School, established in 1831, by 100 children; the Ann Street School, opened in 1827, by 140 children; the Islington School, also opened in 1827, by 65 male and 55 female children; the All Saints' School, commenced in 1829, by 90 children; one school in the parish of Acton, opened in 1833, is attended by 120 children. These schools are supported in some cases wholly by voluntary contributions, and in others, jointly by this means and payments from the parents. There are besides six infant schools, containing 191 children, which are entirely supported by weekly payments from the parents.

There are, including boarding-schools, the above-named infant-schools and charity-schools, about 133 daily-schools in Birmingham. The St. Philip's School of Industry is attended by 60 girls, who contribute, by the produce of their work, to the support of the school. The school in Tinfold Street, and St. Mary's School, are national schools; the former is attended by 278 males and 145 females, and the latter by 170 males and 140 females. In another (the Workhouse School) are 123 males and 140 females; another, containing 160 children (chiefly boys), belongs to the Roman Catholics, and is partly supported by payments from the parents and partly by voluntary contributions. The New Jerusalem Church Free School is attended by 126 boys, who each pay 3*d.* a-week; and the salary of the master is increased to 84*l.* 10*s.* a-year by voluntary contributions. The boys' Lancasterian School contains 230, and the girls' Lancasterian School 110 scholars; and each child pays 1*d.* per week. In 95 of the daily-schools of Birmingham the cost of instruction is defrayed entirely by the parents.

In the town of Birmingham there are 31 Sunday-schools. Mr. Matthews, in a little tract published in 1830, entitled 'A Sketch of the Principal Means which have been employed to ameliorate the Intellectual and Moral Condition of the Working Classes at Birmingham,' says:—"Birmingham was one of the places where this benevolent plan of ameliorating the mental condition of the working-classes was not only very early adopted, but every religious denomination cordially and zealously united to support and promote it." Nine of the above schools, containing 1181 male and 1053 female children, are supported by the Established Church; and five of them possess lending libraries. Two Roman Catholic Sunday-schools are attended by 93 males and 53 females. Five others (in two of which there are lending libraries) are supported by the Wesleyan Methodists. They contain 914 male and 968 female scholars. The members of the Methodist New Connexion support one school, which is attended by 125 children; the Arminian Methodists another, attended by 88 children; and the school supported by the Primitive Methodists is attended by 740 males and 760 females. To the latter school there is attached a lending library. The four schools, in connexion with the Independents, each possess lending libraries: the number of children attending the schools is 860 males and 650 females. The Baptists support two schools, which are attended by 592 males and 490 females. Both possess libraries. To one an adult school is attached, which is attended by 121 males and 35 females. There are two Unitarian Sunday-schools, which are attended by 1100 boys and 303 girls, and to each of them a library is attached. There are also, in conjunction with these two schools, saving clubs and a benefit society, which are stated to have had a beneficial influence in the formation of habits of economy. The total number of children attending the Sunday-schools of Birmingham may be estimated at about 11,000. The number of children

attending twelve Sunday-schools established in the suburbs is about 2566.

In the little work by Mr. Matthews, which we have previously quoted, an account is given of some early attempts which were made to enlarge Mr. Raikes's scheme of Sunday-school instruction. Mr. Matthews says,—“In 1789 some young men conceived the idea of extending the plan of Mr. Raikes by taking under their care the youths when they were dismissed from the Sunday Schools. They designated themselves the ‘Sunday Society:’ their purpose was to teach writing, arithmetic, and also to communicate such other information as would not only contribute to form the moral character of the boys, but be useful to them in their several future occupations, as well as to keep them in the paths of rectitude. Hence geography, book-keeping, and drawing, were afterwards added, as well as moral instruction: Moreover, some of those who engaged in this attempt had cultivated a taste for natural philosophy, and belonged to a small society, established a few years before, for their mutual improvement in useful knowledge; and as some of them were skilful and ingenious as workmen, they constructed a variety of apparatus for experiments to illustrate the principles of mechanics, hydrostatics, electricity, pneumatics, and astronomy. This Philosophical Society also possessed a well-selected, though not a large library, consisting principally of works on scientific subjects; and they permitted the reading of their books by others, unconnected with them, upon payment of a small subscription. Some of its members likewise occasionally gave lectures on the above subjects to the young men and others connected with the manufactories in the town; thus gratuitously communicating scientific information, and probably creating a taste for it in a larger circle. Hence the disposition to such pursuits was widely spreading in the town; for the various individuals belonged to different manufactories, and they were equally ardent and active in promoting the success of such schemes.

“As those who originated the plan of giving farther instruction to the boys when they had been taught to read in the Sunday Schools had witnessed the machinations which had heretofore been employed to check the current of intellectual improvement in the town, they deemed it discreet to provide the means of accomplishing their purposes from their own resources, and thus to prevent any improper interference to thwart their views of being useful. They first engaged a large and commodious public room for the business of their school; but, as its occupation was chiefly on a Sunday, in order to increase their pecuniary means, the idea was suggested of applying the use of their room to the purposes of a debating society, in which some useful and interesting question should be discussed once a week, and strangers admitted at sixpence each. This point was also attained: some of the first questions were on subjects connected with education; and as the discussions attracted great attention, they not only increased the spirit of liberal inquiry in the town, but also produced an earnest desire of information in many of those who attended them.”

These enlightened and benevolent efforts were proceeding when the riots of 1791 occurred. These melancholy scenes (it is justly remarked) proved the importance of increasing the exertions to instruct and enlighten the labouring classes; but such was the acrimonious spirit which they occasioned that the Sunday Society was compelled to suspend its useful labours for a period of several months, and it was not until 1792 that the members resumed their plans. In 1796 a new society, entitled the “Brotherly Society,” was formed, to which, with the aid of additional labourers, they devoted their earnest exertions. The following rule

explains the object of this association, and shows how nearly it approximated to the Mechanics' Institutions of the present day.—“‘The subjects for improvement shall be Reading, Writing, Arithmetic, Drawing, Geography, Natural and Civil History, and Morals; or, in short, whatever may be generally useful to a Manufacturer, or as furnishing principles for active benevolence and integrity.’—Mr. James Luckcock, who was one of the first to engage in the project, delivered a series of Moral Lectures to this society, which he afterwards published under the title of ‘Moral Culture.’” In 1794 and 1795 courses of lectures were delivered by another individual on the ‘Philosophy of the Human Mind as connected with Education;’ the ‘Theory of Morals;’ and also on ‘General History.’ The admission to these lectures was gratuitous. In 1797 a library was established for the peculiar use of the working-classes by Messrs. T. and S. Carpenter, and the former individual occasionally gave lectures gratuitously on some useful subject to young artisans. The present Mechanics' Institute is not so well supported as such an institution deserves to be.

Birmingham has long enjoyed the advantage of a public library. The first was established in 1779, and its rules were greatly improved by Dr. Priestley. The spirit in which it was unhappily conducted occasioned another library to be established in 1796, and a handsome building has been erected for its reception. Both libraries are now liberally supported.

The beneficial influence of the many useful institutions for which Birmingham is distinguished, cannot fail to have struck persons who are even personally unacquainted with the town. Within the last five years it has frequently been the scene of immense public meetings, but the individuals present have assembled and separated with as much quietness as if they had been attending a lecture on the steam-engine. Such a multitude of persons could not have been gathered together forty years ago without occasioning popular tumults, especially when political feeling had called and united them together. The working classes of Birmingham may, therefore, be most favourably contrasted with those of the last generation. Mr. Matthews says that “previous to the wide diffusion of knowledge among the working classes in the town and its vicinity, whenever trade was so bad as to occasion a deficiency of employment, or provisions were at a high price, bakers, millers, butchers, farmers and others became the objects of their hatred and vengeance, and often suffered considerably from the depredations committed upon them, by the injury or destruction of their property. Happily, however, the influence of education has obviated these very serious evils; and such violations of justice and law as indiscriminate plunder and riotous assemblages, do not now occur to disgrace the population. Though endued with feeling, they have learned to reason, and consequently their actions are consonant with their improved condition.”

Placed in circumstances in which their interests are deeply involved in several important political questions, the increase of political knowledge among them is to be desired rather than repressed; and it is gratifying to know that one of the consequences of their increased intelligence in this respect has been to render them more peaceable and orderly members of society. In the different branches of the Birmingham trade the proportions per cent. which materials bear to wages is so great as to be in some cases almost resolvable into the latter proportion. The theory of wages, of free trade, &c., are therefore familiar subjects of discussion among the most intelligent workmen of Birmingham; and it is highly desirable that they should have the benefit of all the light which the best information is enabled to throw on such subjects.

Birmingham still exists under the simple form of local government which it possessed when an obscure and unimportant place. The public authority is vested in a constable and a headborough, assisted by other officers, whose duty it is to inspect weights and measures, and ascertain that articles of food are not brought to market in an unfit state. The bailiffs have gradually assumed a degree of consequence to which, under the lords of the manor, they were not originally entitled. The town, it is probable, will possess a better organized municipal system at no great distance of time.

A company for supplying the town with water was incorporated in 1826. The supply is chiefly drawn from the Thome. The waterworks are on the right side of the Litchfield road, about two miles from the town. There are two reservoirs on a level with the top of the Town Hall, so that every house can be thoroughly supplied, even in the attics; and there are fire-plugs in all the streets, as in the metropolis. The town has also the advantage of possessing two gas companies.

There is a debtors' gaol at Birmingham. The costs of the court in which cases are heard is limited for debts not exceeding 40s., to 4s. 2d., and for debts exceeding 40s. and not exceeding 5l., to 7s. 8d. The number of persons confined in the years 1830-1-2-3 and 1834 was as follows:—492, 548, 534, 495, 449.

The estimates of the annual value of real property, as assessed to the property tax in 1815 were—for Birmingham, 247,088l.; Aston, 53,142l.; Edgbaston, 11,724l. The aggregate of the rental of Birmingham and its suburbs is about 500,000l., which makes a freehold of 10,000,000l. at twenty years' purchase. The poor's rate for the year ending March, 1834, paid by each of the above parishes, was as follows.—Birmingham, 49,713l.; Aston, 8,621l.; Edgbaston, 1,178l. In 1676 the poor's rate for the parish of Birmingham amounted to 338l.; in 1745 to 746l. From the improvements, which the amended system of parochial relief has produced in other places, it is very probable that this heavy local burthen will also be diminished at Birmingham.

The amount of assessed taxes paid within the parts which now constitute the parliamentary borough was in 1828, 26,929l.; 1829, 27,804l.; 1830, 28,350l. The amount of postage collected in Birmingham during the years 1832, 1833, and 1834 was respectively—28,685l., 28,812l., 29,258l.

By the Reform Bill Birmingham was invested with the right of sending two Members to Parliament. The limits of the borough comprise the parishes of Birmingham and Edgbaston, and the townships of Bordesley, Deritend, and Duddeston with Nechels. The number of houses worth 10l. a year within this limit was, in 1831, about 7000, and the total number of houses 30,000.

Birmingham has two roads communicating with the metropolis; one passing through Banbury and Warwick, the distance by which is 119 miles; and the other is the great road from London to Holyhead, which is nine miles shorter. The mail reaches Birmingham in eleven hours and eight minutes after leaving the General Post Office. The distance from London to Birmingham in a direct line is 102 miles. Birmingham is in the very centre of the canal system, to which indeed it has been indebted for a great measure of its prosperity. One canal communicates with the Severn, another with the Trent and Mersey, a third line with the Thames; so that the products of its industry can be conveyed in an economical manner to the ports of London, Liverpool, Bristol, and Hull. The railway, which is now in progress, will still further accelerate the activity of Birmingham, and afford increased facilities for intercourse with it. The line passes through Watford and Rugby. At the former place the cuttings are very deep, and the embankments

high, and a funnel is at present cutting which will occupy considerable time. Liverpool is only seventy-nine miles distant from Birmingham, and it is therefore highly probable that the railway will be at some period extended to that place.

It will be out of place to notice in this article all the important advantages which cannot fail to be derived from the application of steam to the rapid transport of merchandize and passengers on railroads. When private carriages were becoming general in this country an Act was passed for restricting their use, on the ground that the horses would consume the food of the poor. We have lived, however, to see the fallacy of this notion; and, within the last few years (between 1828 and 1835), wheat, the food of man, has fallen 36 per cent., while oats, the food of horses, have only fallen 2½ per cent., the effect being exactly the reverse of the anticipations of a former period. Assuming that the general effects of railways will be to lessen the number of draught horses at present required, and that there will not be a corresponding increase in the number of those used for pleasure, the result will most probably not be far different from the anticipations of Mr. Alexander Gordon, who in his work on 'Elemental Locomotion' says,—“If instead of 20,000 horses, we keep 30,000 fat oxen, butchers' meat will be always cheap to the operative classes, whilst the quantity of tallow will of course make candles cheap; and so many hides lower the price of leather and of shoes, and all other articles made of leather. Or the same quantity of land may then keep 30,000 cows, the milk of which will make both butter and cheese cheaper to the poor, as well as the labouring manufacturer; all which articles are very considerable, and of material moment in the prices of our manufacturers, as they, in a great measure, work their trade to rise and fall in price, according to the cheapness of their materials and the necessaries of life. The same may be said in favour of more sheep and woollen cloths.” In a few years, however, experience will more effectually enlighten us on these subjects than the most plausible conjectures.

In 1783 Hutton estimated that there were at that time in Birmingham 209 persons worth 2,500,000l., viz. :—

3 persons, each possessing	£100,000
7 " "	50,000
8 " "	30,000
17 " "	20,000
80 " "	10,000
94 " "	5,000

In 1828 Mr. James Luckcock made a calculation of the wealth of the town, which he estimated at 10,000,000l. viz. —

1 person possessing	£400,000
2 " (each)	300,000
3 " "	200,000
4 " "	150,000
5 " "	100,000
6 " "	80,000
10 " "	50,000
20 " "	30,000
30 " "	20,000
50 " "	15,000
70 " "	10,000
100 " "	5,000
200 " "	2,000
400 " "	1,000
1000 " "	200
2000 " "	250
3000 " "	100
4000 " "	50
5000 " "	25
5000 " "	15

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TUTBURY CASTLE, STAFFORDSHIRE.



[Interior of Tutbury Castle-Yard.]

THE Dove, which from its rise on the southern side of Ax-edge, within a few miles of Buxton, to its confluence with the Trent, in the neighbourhood of Burton, forms the natural boundary of the counties of Derby and Stafford, runs through the romantic Dovedale, and visits in its course a variety of picturesque scenery, noble mansions, and antique remains. A description of Dovedale has been given in the 126th No. of the 'Penny Magazine.'

Tutbury is seated on the south or Staffordshire side of the Dove, and is a very clean pretty place, mostly inhabited by farmers and husbandmen, and by such handicraftsmen as are usually to be found in every town and village. It possesses no place of manufacture, except a cotton-mill, but this gives employment to the young of both sexes in the surrounding neighbourhood. Seated at the extremity of a high tract of ground, known as Needwood Forest, it is well sheltered from the eastern winds, while in the opposite direction it overlooks a rich valley, interspersed with woods, villages, and mansions, bounded by the towering hills of Derbyshire.

Tutbury lies about eleven miles south-west of Derby, and about a mile south of the road to Uttoxeter and the potteries. The castle forms a prominent object to the left in many parts of the road from Derby, but the most picturesque view is obtained of it from a point near the river. The ruins appear towering over the wood-covered hill, and the church is seen on a

bare slope a little distance below, while some tall fragments to the right appear like broken pyramids in the elevated horizon. It forms altogether from this point one of those pictures on which the eye of taste delights to dwell.

The castle, or rather its ruin, is situated to the south-west of the town. Built on the summit of a high natural mount, with a deep and rapid river in front, it must once have been a very grand and imposing object. The castle-yard now forms the homestead of a farm, and part of the buildings on the southern side, with the addition of a semi-octagonal tower-like entrance, is fitted up as the residence of the farmer; all the other parts are but fragments of walls. The engraving represents the interior of the castle-yard.

It is difficult to determine when Tutbury Castle was first erected. From its forming one of the chain of forts on the Mercian frontier, it was probably in existence during the Heptarchy, and is conjectured to have been the palace of Offa, of Kenulph, and of Ethelred; the last of whom came to the throne in 674, and immediately on his accession "granted to his niece, the pious Werburga, the neighbouring village of Hanbury, where she erected a nunnery, in which she was afterwards buried." "After a peaceful interval of 200 years from the accession of Ethelred," says Sir Oswald Mosley, "the town and castle of Tutbury, together with the monastery at Hanbury, were overwhelmed

in one common destruction by that formidable irruption of the Danes, who drove the last of the Mercian sovereigns from his throne."

"From this fatal period," Sir Oswald continues, "the castle remained a ruin until after the Norman conquest, and the ferocious Danes continued to exercise their tyrannical sway in its vicinity for more than forty years, when the Saxons, assisted by the brave Ethelfleda, daughter of Alfred the Great, succeeded in expelling them from this part of the kingdom: their triumph, however, was but transitory; the Danes returned, and a second time became masters of the country, until at length (A.D. 1012) the Saxon inhabitants, goaded by oppression, and driven to despair, eagerly embraced King Ethelred's plan of extirpating the whole race by one general massacre, and the opening scene of this bloody tragedy is actually fixed by an ancient historian at Houndhill, about five miles distant from Tutbury."

In Domesday we find the castle of Tutbury, with 146 lordships in the surrounding counties, besides many others in various parts of the kingdom, was held by Henry de Ferrers, a particular favourite of William I. He raised the castle from its ruins, built it upon a more capacious and splendid plan, and made it for a time his principal residence; he rebuilt the citadel or keep, "excavated the fosse, and enclosed the whole of the present area within the walls of his castle," and founded in its immediate vicinity "a priory which he and his wife Bertha richly endowed."

The castle of Tutbury continued to be the residence of the family of Ferrers, till the latter end of the reign of Henry III., when in consequence of the repeated acts of rebellion of Robert de Ferrers, Earl of Derby, it was nearly destroyed by the king's army; and the lordship or honour, after repeated acts of clemency on the part of the king, was finally forfeited, and became by royal grant the property of Edmund Plantagenet, Earl of Lancaster, second son of the king.

The castle seems not to have met with much reparation from the hands of Earl Edmund, but his successor Thomas, the second Earl of Lancaster, not only repaired the ravages it had sustained while in the hands of the Earl of Derby, but gave to it a grandeur and magnificence which it had not previously possessed. He made it his principal residence, and, from the more than princely style in which he lived, became a benefactor to the surrounding country, giving a stimulus to the industry of his tenantry, and finding a mart for all their productions; his housekeeping in one year (1313) amounting to the amazing sum of 22,000*l.* of our present money, and this too at a time when provisions of all kinds were remarkably cheap. An account of the fate of Earl Thomas will be found in No. 166 of the 'Penny Magazine,' with some particulars respecting the finding of the Tutbury coins in the bed of the Dove in 1831.

By the attainder of the Earl of Lancaster the castle became the property of the crown, and was granted in succession to different persons, none of whom appear to have taken any interest in its restoration. It became at last vested in the celebrated John of Gaunt, the second Duke of Lancaster, by whom it was again restored to its former strength and beauty. On his return to England after his marriage with the Lady Constance, Queen of Castile and Leon, he gave his duchess the choice of his various castles for her abode, and she, without hesitation, fixed on Tutbury, which the duke immediately fitted up for her as a royal palace. It became her residence; and, as is well observed, "this was by far the most prosperous period in the annals of Tutbury: the splendour of the queen's court,—the number of strangers who daily resorted there,—and, above all, the magnificent liberality of John of Gaunt, rendered this place somewhat similar to a

modern Windsor. The town of Tutbury was enlarged far beyond its ancient dimensions;—the agriculturist found here a ready market for his produce, and the merchant for his goods;—everything contributed to enrich the inhabitants, and to increase the value of property in the vicinity."

On the accession of Henry of Bolingbroke to the crown, Tutbury, and the other parts of the duchy of Lancaster, which had descended to him as duke of Lancaster, became the property of the kings of England. Its popularity passed away;—other events fixed its proprietors in other parts of the kingdom, and few among them ever condescended to rest a night in this once-favoured castle. Henry VII., indeed, whose reign was comparatively peaceful, sometimes brought his court hither to enjoy the amusement of hunting in the adjacent Forest of Needwood, and of one of his excursions we find the following anecdote:—

"One day, during the ardour of the chase, he was separated from all his companions; and having in vain sought to join them again through the thick masses of wood with which the forest abounded, he determined at length to extricate himself from his difficulties by proceeding to the nearest village, and inquiring his way from thence to Tutbury. It so happened that, for this purpose, he stopped at the house of a poor man named Taylor, in the village of Barton-under-Needwood, whose wife had, not long before, presented him with three sons at a birth. The father volunteered his services to conduct the king (who did not disclose his rank) to the place of his inquiry; and while he was making himself ready for that purpose, the mother introduced the three little babes to the stranger at the cottage-door. The king was much pleased with the adventure; and, in reward for the poor man's services, undertook to pay for the education of the three children, if they should live long enough to be put to school. Taylor expressed his grateful thanks, and the king did not forget his promise. When the three children attained man's estate, they had made such good use of the learning thus afforded them, that they all became doctors in divinity, and obtained good preferment. John Taylor, the eldest of them, became Archdeacon of Derby, Rector of Sutton Coldfield, and Clerk of the Parliament that sat in the seventh year of the reign of Henry VIII. He was made Master of the Rolls in 1528, and died in 1534; but not before he had proved his gratitude to the Almighty Disposer of Events for the singular mercies extended to himself and his brothers by erecting the present church of Barton, near the site of the cottage in which they first saw the light."

Tutbury Castle seems not to have been noticed during subsequent reigns; in that of Elizabeth it acquired notoriety as being, at two different periods, the prison of the fair but unfortunate Queen of Scotland. She was brought hither, under the custody of the Earl of Shrewsbury, in January, 1569. She left Tutbury for Wingfield Manor in the spring, under the guardianship of the same earl, whence she was removed to Coventry in November. In about two months she was brought back to Tutbury; soon afterwards she went to Wingfield, and in the course of the summer to Chatsworth. During the next fourteen years "she resided principally at Sheffield, occasionally visiting Chatsworth and Buxton. In the months of October, November, and December, 1584, she was again at Wingfield, having been placed there under the care of Sir Ralph Sadler, and on the 14th of January following was brought back through Derby to Tutbury Castle."

Sir Ralph Sadler in his papers gives a very accurate description of the state of Tutbury Castle during the last imprisonment of the unfortunate Mary. "The whole area, containing about three acres, was encompassed on all sides but one with a strong and lofty

embattled wall and deep fosse, as the present ruins plainly show. The principal entrance was by a bridge under the great gateway to the north; at a small distance to the left of this gateway stood a building containing Mr. Dorell's (the superintendant) office and bedchamber, and four other rooms. Along this north-east wall, about 160 feet from the entrance, was a lofty tower embattled, containing four rooms, viz., a store-house at the bottom, above Curle's apartment, over which was the Doctor's, and at the top the chief cook's. This tower was then much shaken and cleft, but it still forms a prominent feature among the castle ruins. At a little distance from this began the principal suite of the queen's apartments, which did not overlook the walls, but formed a long line of low buildings, on the eastern side of the area; they contained the queen's dining-chamber and closets adjoining, her bed-chamber, cabinet, place for wood and coals, and her gentlewomen's apartments." The site of the present farmer's house were store-rooms, kitchen, scullery, &c.; and where the modern erected round tower now stands upon the mount was the Keep, called Julius's Tower, even at that time in a state of ruin. The dungeons or vaults under the greater part of the building were used as store-rooms for provisions and goods.

Sir Oswald Mosley remarks, "After the departure of Mary Queen of Scots, no incident occurred at Tutbury during the remainder of Elizabeth's reign which is worthy of notice. Her son, King James I., visited more than once this place of her captivity; in all probability his feelings were not much affected when he surveyed the late abode of his unfortunate mother, for extreme sensibility was not one of his foibles. His purpose in coming here was not to indulge melancholy reflections, but to gratify an occasional delight which he took in the diversion of hunting; the scenery of Needwood particularly attracted his notice, and a favourite eminence, on which he sometimes rested during the chase, was denominated from him 'The King's Standing.' He was at Tutbury Castle from the 16th to the 20th of August, 1619; again on the 19th of August, 1621; and from the 16th to the 19th of the same month, in 1624."

In August, 1636, Tutbury was visited by King Charles I., and in 1634 he is stated to have spent a fortnight here. This was before the commencement of his troubles; but when he had decided on an appeal to the sword, he sent a mandate to the high sheriff of Staffordshire, commanding him to raise forces, both horse and foot, at the expense of the county, and to place them as a garrison in the castle of Tutbury; this was in November, 1642. On the 24th of May, 1645, the King himself, accompanied by Prince Rupert and a large army, took up his abode at Tutbury, and the troops were quartered in the surrounding villages. This was on Whitsunday, and on the following Tuesday the king marched off for Ashby-de-la-Zouch and Leicester. The battle of Naseby, which decided the affairs of the king, took place on the 14th of June; and on the 12th of August, 1645, the unfortunate monarch, attended by about 100 foot soldiers, visited Tutbury for the last time.

"The castle of Tutbury was one of the last places within the county of Stafford that held out for the king; the natural strength of its situation and the well-known bravery of its garrison rendered it almost impregnable. Repeated attempts had been made by the Parliament forces to take it."

It was surrendered to Sir William Brereton on the 20th of April, 1646, on terms more honourable than are generally granted. An order of Parliament for the total demolition of the castle soon followed, and this majestic pile was once more reduced to ruin.

TRADES AND MECHANICAL ARTS OF THE ANGLO-SAXONS.

(Abridged from Turner's History of the Anglo-Saxons.)

IN the present state and under the fortunate constitution of the British islands, our tradesmen and manufacturers are an order of men who contribute essentially to uphold our national rank and character, and form a class of actual personal distinction superior to what the same order has in any age or country possessed, except in the middle ages of Italy. They are not only the fountains of that commerce which rewards us with the wealth of the world, but they are perpetually supplying the other classes and professions of society with new means of improvement and comfort; and with those new accessions of persons and property which keep the great machine of our political greatness in constant strength and activity.

Our earlier ancestors had neither learnt the utility of dividing labour nor acquired the faculty of varying its productions. They had neither invention, taste, enterprise, respectability, influence, or wealth. The tradesmen of the Anglo-Saxons were, for the most part, men in a servile state. The clergy, the rich, and the great, had domestic servants, who were qualified to supply them with those articles of trade and manufacture which were in common use. Hence, in monasteries, we find smiths, carpenters, millers, illuminators, architects, agriculturists, fishermen. Thus a monk is described as well skilled in smith-craft. Thus Wynfleda, in her will, mentions the servants she employed in weaving and sewing; and there are many grants of land remaining, in which men of landed property rewarded their servants who excelled in different trades. In one grant, the brother of Godwin gives to a monastery a manor, with its appendages; that is, his overseer and all his chattels, his smith, carpenter, fisherman, miller; all these servants, and all their goods and chattels.

The Anglo-Saxon artificers and manufacturers were for some time no more than what real necessity put in action. Their productions were few, inartificial, and unvaried. They lived and died poor, unhonoured, and unimproved. But, by degrees, the manumission of slaves increased the numbers of the independent part of the lower orders. Some of the emancipated became agricultural labourers, and took land of the clergy and the great, paying them an annual gafol, or rent; but many went to the burghs and towns, and as the king was the lord of the free, they resided in these under his protection, and became free burghers or burgesses. In these burghs and towns they appear to have occupied houses, paying him rent, or other occasional compensations, and sometimes performing services for him.

By slow degrees the increasing numbers of society, or their augmented activity, produced a surplus property beyond the daily consumption, which acquired a permanent state in the country in some form or other, and then constituted its wealth. Every house began to have some article of lasting furniture or convenience which it had not before; as well as every tradesman goods laid in store, and every farmer corn, or cattle, or implements of tillage more numerous than he once possessed. When this stage of surplus produce occurs, property begins to multiply; the bonds of stern necessity relax; civilization emerges; leisure increases, and a great number share it. Other employments than those of subsistence are sought for. Amusement begins to be a study, and a class of society to provide it becomes desired. The grosser gratifications then verge towards the refinements of future luxury. The mind awakens from the lethargy of sense, and a new spirit, and new objects of industry, invention, and pursuit, gradually arise in the advancing population. All these successions of improvement become slowly visible to

the antiquarian observer as he approaches the latter periods of the Anglo-Saxon dynasty. But they were not the accompaniments of its first state; or, if they at all existed, they were confined to the court, the castle, and the monastery; and were not indeed to be found among the inferior thegns or the poorer cloisters. Some of these had so little property that they could not afford to allow meat, and others not wheaten bread, as an article of their food. In such miserable abodes the comforts of surplus property could not be obtained; and where these are not general, the nation is poor. This epithet was long applicable to the Anglo-Saxon octarchy.

Both war and agriculture want the smith. Hence one of the most important trades of the Anglo-Saxons was the smith, who is very frequently mentioned. The smiths who worked in iron were called isernsmithas. They had also the goldsmith, the seolfersmith (silver-smith), and the arsmith or coppersmith. Smiths are frequently mentioned in Domesday. In the city of Hereford there were six smiths, who paid each 1*d.* for his forge, and who made 120 pieces of iron from the king's ore. To each of them 3*d.* was paid as a custom, and they were freed from all other services.

The treow-wyrhta, literally tree or wood workman, or, in modern phrase, the carpenter, was an occupation as important as the smith's.

The sceowyrhta, or shoemaker, seems to have been a comprehensive trade, and to have united some that are now very distinct businesses. He says, in an ancient Anglo-Saxon dialogue, "My craft is very useful and necessary to you. I buy hides and skins, and prepare them by my art, and make of them shoes of various kinds; and none of you can winter without my craft." He subjoins a list of the articles which he fabricates, viz.—"Ankle leathers, shoes, leather hose, bottles, bridle thongs, trappings, flasks, boiling vessels, leather neck-pieces, halters, wallets, and pouches."

The salter, baker, cook, and fisherman were common occupations among the Anglo-Saxons.

Besides the persons who made those trades their business, some of the clergy, as we advance to the age preceding the Norman Conquest, appear to us as labouring to excel in the mechanical arts. Thus Dunstan, besides being competent to draw and paint the patterns for a lady's robe, was also a smith, and worked on all the metals. Among other labours of his industry, he made two great bells for the church at Abingdon. His friend Ethelwold, the bishop, made two other bells for the same place, of a smaller size; and a wheel full of small bells, much gilt, to be turned round for its music, on feast-days. He also displayed much art in the fabrication of a large silver table of curious workmanship. Stigand, the bishop of Winchester, made two images and a crucifix, and gilt and placed them in the cathedral of his diocese. One of our kings made a monk who was a skilful goldsmith an abbot. It was even exacted by law that the clergy should pursue these occupations; for Edgar says, "We command that every priest, to increase knowledge, diligently learn some handicraft." It was at this period that it began to be felt that skill could add value to the material on which it operated; and as the increasing wealth of society enabled some to pay for its additional cost, a taste for ornament as well as massy value now emerged.

The art of glass-making was unknown in England in the seventh century, when Benedict, the abbot of Weremouth, procured men from France, who not only glazed the windows of his church and monastery, but taught the Anglo-Saxons the art of making glass for windows, lamps, drinking-vessels, and for other uses.

The fortunate connexion which Christianity established between the clergy of Europe favoured the

advancement of all the mechanical arts. We read perpetually of presents of the productions of human labour and skill passing from the more civilized countries to those more rude. We read of a church having a patine made with Greek workmanship; and also of a bishop in England who was a Greek by birth.

They had the arts of weaving, embroidering, and dyeing. Edward the Elder had his daughters taught to exercise their needle and their distaff. Indeed the Anglo-Saxon ladies were so much accustomed to spinning, that just as we in legal phrase, and by a reference to former habits now obsolete, term unmarried ladies spinsters, so Alfred in his will, with true application, called the female part of his family the spindle side. The Norman historian remarks of our ancient countrywomen that they excelled with the needle and in gold embroidery. Aldhelm's robe is described to have been made of a most delicate thread, of a purple ground, and that within black circles the figures of peacocks were worked among them of ample size.

Bede alludes to their jewellers and goldsmiths. From the custom of the kings making presents of rich garments, vases, bracelets, and rings to their witenagemot and courtiers, and of great lords doing the same to their knights, the trades for making these must have had much employment. One of their trades seems to have been the tavern, or the public-house; for a priest is forbidden to drink at the "wine tuns." An ale-house and ale-shop are also mentioned in the laws.

ROMAN MONUMENT AT IGEL, IN PRUSSIA.

IGEL is a small village in Prussia, situated on the road from the ancient city of Treves to Luxemburg. There is nothing in the village worthy of particular notice; but the ancient Roman monument represented in the engraving has attracted attention to the place, and given rise to considerable speculation among antiquaries. The whole surrounding country is full of Roman remains. Treves itself, in the days of the Roman empire, was a place of great splendour;—its monuments and ruins attest the importance and magnitude of the town, which has been noticed in No. 173. The Emperor Augustus conferred on it the title of capital of Second Belgian Gaul; and Ammianus Marcellinus, says Malte Brun, "wishing to describe its extent, population, and edifices, calls it the Second Rome. The ruins of a Roman way between Treves and Reims are observed at some distance on the road which leads to Luxemburg. But perhaps the most curious monument which the Romans have left in all the country of the Gauls is the one at the village of Igel, in the same direction and on the same road. Antiquaries have examined it in vain, and the purpose for which it was erected is still doubtful. It is a sort of quadrangular tower, terminated in the form of a pyramid, and surmounted by a terrestrial globe, on which an eagle rests. Ausonius says that, like the pharos of Memphis, it rises above every other building. If it be the tower that he alludes to, some allowance must be made for poetical license. Its height, it is certain, is less than seventy feet, and its breadth not greater than fifteen. It is stated in a letter, published in 1824, and addressed to Vauquelin, the celebrated chemist, that the monument is crowned by a genius, with extended wings, kneeling on a globe. The author of the letter is probably mistaken; or, if his statement be correct, it proves the ignorance of the German architect who was appointed by government to repair the tower. We examined it carefully before it was repaired, and could easily distinguish an eagle in the same position as on several medals. It is well known that the head of the eagle was destroyed by a cannon-

hall in 1675, during the engagement in which the Marshal of Crequi was defeated on the plain of Treves.

“As to the purpose for which it was erected, it appears to us to have been a monument raised to the memory of the dead. It cannot be denied that a learned German is of a different opinion: he supposes that it was intended to record either the birth of Caligula or the marriage of Constantius Chlorus with the Empress Helen. It is not improbable that an orna-

ment on one of the bas-reliefs—the figure of a man offering his hand to a woman—has originally led to this supposition. But it may be mentioned that the same opinion has been formerly maintained and refuted. The dances and games of the different genii with which the tower is decorated, as well as a figure of the shepherd Paris, are not incompatible with the design of a funeral monument. A mutilated inscription, which has been explained and restored by anti-



[Roman Monument at Igel, near Treves.]

quaries, leads us to conclude that the tower was built by two members of the *Secundini* family, in memory of Secundinus Securus, a wealthy merchant, the founder of Igel, during the latter part of the fourth century*."

The following is a short account of this very curious Roman monument from Goethe's Travels:—

"At Igel, on the road between Treves and Luxemburgh, I was struck by a Roman monument; being aware how happy the Romans were in the choice of the sites of their monuments and buildings, in fancy I got rid of the surrounding hovels which encumbered it, and then the position was fully fitting to the object. The broad stream of the Moselle, which is joined by the waters of the Sarr, wanders close by, and the pleasing undulation of the ground, and the luxuriant vegetation of the soil, all tend to give importance and dignity to the building, which may be termed an architectural sculptured obelisk. It rises in different stories, arranged in an artist-like manner, one above the other, ending in a kind of pinnacle, ornamented with scales, like tiles, surmounted by a ball, with an eagle and a serpent rising in the air. I trust some of the engineers whom the present war has brought to this country may be induced to make an accurate measurement of it, and make drawings of the figures which are still to be distinguished on its four sides. How many dull and shapeless obelisks have I seen erected in my time, no one ever thinking of referring to this as a model. It must be admitted that it is not of the best time, the style showing it to be of the lower age. In the subjects of the ornaments, one recognizes that desire which the Romans always had of handing down to posterity personal representations, and all the circumstantial details and demonstrations of activity and real life. Here are parents and children opposite to each other, people are eating in a family circle, and in order that the spectator may know whence comes the good cheer, loaded sumpter horses are seen approaching. Traffic and commerce are represented in various ways, for it seems that those by whom the monument was erected were commissaries of the army, thus fully testifying that then, as now, such gentry acquired sufficient riches by their calling.

"The whole obelisk is built of massive blocks of sandstone, and then, as from the face of a rock, were hewn out the ornaments; and it is to the adoption of this mode that the duration of this monument and its sculpture, through so many centuries, is to be ascribed."

ON HORSE-FOOD.

PEOPLE generally imagine, when they hear the quality of oats mentioned, that their only desirable properties consist in their brightness of colour, purity of scent, and freedom from all appearance of having been damp or heated; but they rarely advert to the fact, that, when these objects have been attained, their main value yet rests in their weight; and a material difference may be found in samples which, to the hand and eye of one who is not a good judge of the article, may appear to be of nearly the same sort, though the bushel of the one kind may be several pounds lighter than the other. The following table will show the quantity of meal which, in ordinary seasons, is usually extracted from certain weights of that grain, and on which the nourishment to be obtained from it depends:—

	Weight per bushel avoirdupois.			
	25 lbs. 2 oz. ditto in meal		16 lbs. 14 oz. ditto in husk	
42 lbs. produce in meal	25	6	16	10
40 " "	23	6	16	10
38 " "	21	12	16	4
36 " "	20	3	15	13
34 " "	18	11	15	5
32 " "	17	5	14	11

Thus it will be seen that the beast which is fed upon oats of the latter description (which abound in our

* Malte-Brun, Geography, vol. vii. p. 251.

markets) is a loser of about one-third of the nutriment which he would obtain if supplied with those of good quality; and if this be not looked to, he will, on a long journey, soon fall off in condition; for the price varies according to the weight, and stable-keepers take especial care not to buy the heaviest.

The custom of feeding by measure has thus led to great irregularity in the care and maintenance of horses, and has given rise to a prevalent notion that beans and peas are more nutritive, and consequently more heating than oats; though, according to an analysis made by Sir Humphry Davy, and inserted in his 'Elements of Agricultural Chemistry,' it was found that 1000 parts contained severally the following portions of matter:—

Grain.	Whole Quantity of Soluble, or Nutritive Matter.	Mucilage and Starch.	Saccharine Matter, or Sugar.	Gluten, or Albumen.	Extract, or insoluble Matter.
Good Scotch Oats ..	743 ...	641 ...	15 ...	87 ...	—
Common Horse-beans	570 ...	426 ...	— ..	103 ...	41
Dry Grey Peas	574 ...	501 ...	22 ...	35 ...	16

Thus it will be seen that oats are, in fact, greatly superior, weight for weight, to either beans or peas; for the average weight of each, when of fair quality, may be assumed as—

Feed Oats	40 lbs. Per Bushel.
Horse-beans	56 "
Grey Peas	60 "

and if oats be taken at the present price of 3s. 4d. per bushel, or 1d. per pound, the relative value of beans will then be 4s. 8d., and of peas 5s. per bushel.

The cavalry allowance to the army is four feeds of a quartern of oats, weighing 40 lbs. per bushel, or 10 lbs. daily for each horse, together with 12 lbs. of sound meadow hay. Upon this the cattle are kept in excellent working order, and no horse of equal size and muscle can be maintained in good condition upon less. On journeys he should have an additional feed, with a good handful of old beans, if the work be hard; and, once a week, when a leisure day occurs, he should, on the previous night, have a bran-mash, with an ounce of nitre or common salt in it, instead of oats. When our troops were in the Peninsula, the horses were fed, according to the custom of that country, upon barley and straw, only 8 lbs. of the former being allowed instead of 10 lbs. of oats, and they thrive equally well; the barley being considered in that proportion more nutritive, in consequence of the greater amount which it contains of starch, and the smaller quantity of husk. Many postmasters have since partly adopted the same plan; for discoloured barley, which is unfit for malting, may frequently be purchased as cheap as fine oats, and the weight of an equal measure is usually full one-fourth more; indeed, under the late depressed prices of wheat, many inferior samples of that grain have been applied to the same purpose.

An account has been published in the 'Sporting Magazine,' by Dr. Sully, of Wiveliscombe, in Somersetshire, of the mode of feeding, by which his light draught horses, which he constantly uses in single harness upon long journeys at a rapid pace, have been kept during a series of years in high health and perfect working order. The ingredients of the food are divided into four classes, containing different quantities of each, to be used as discretion or convenience may dictate, in the following proportions:—

	1st.	2nd.	3rd.	4th.
	lbs.	lbs.	lbs.	lbs.
Bruised or Ground Beans, Pease, or White Corn	5	5	10	5
Hay, cut into Chaff	7	8	10	8
Straw, ditto	7	10	10	8
Steamed Potatoes	5	5	0	0
Malt-dust, or Ground Oil-cake	0	2	0	2
Brewers' Grains	6	0	0	0
Bran	0	0	0	7
	30	30	30	30

And 2 oz. of Salt to each

The weight of each class is thus equal, and the quantity of nutriment contained in each is supposed to be the same; but he prefers the first and second classes; and we are surprised that he has not adverted to the use of raw carrots, which are well known to have a fine effect upon the wind, and strikingly to improve the appearance of the coat and general condition.

The Doctor, however, properly observes that grooms are wasteful of hay, and, by allowing the horses an unlimited use of it, tempt them to eat too much; his stables are, therefore without racks, and the provender is put into the manger in small quantities during the day. It is indeed a most excellent plan; for not only is the saving in food very considerable, but the animal is thus compelled to masticate it thoroughly, whereas young and greedy cattle are apt to devour part of their corn entire, and old horses lose much of the power of grinding it; it therefore passes through them entire, without affording any kind of nourishment.

The order and economy of the stable are points of the first consideration with every man who justly estimates the condition of his horse. The word, indeed, has an extensive meaning in the opinion of gentlemen, and seems to be so generally well understood, that any remarks on the subject might be deemed superfluous; but in the management of heavy draught cattle, kept more for work than show, it may be assumed to mean a healthy, mellow, clean-skinned hide, without much fat; a lively eye, and general appearance of health. This, however, can only be acquired by a sufficiency of wholesome food; but the quantity in which it should be administered, according to the strength and labour of the animal, and the different kinds and preparation which may be employed with advantage, merits the serious attention of every one who regards the expense; and upon this subject we confidently refer to the copious details which may be found under the head of 'British Husbandry,' in the 'Farmer's Library,' now publishing under the superintendence of the Society for the Diffusion of Useful Knowledge.

THEORIES OF LIGHT.

Two rival theories of light have, during nearly the two last centuries, divided the suffrages of philosophers. The corpuscular, investigated by Newton, accounts for many of the ordinary facts and laws, by supposing infinitely small material particles projected with inconceivable velocity in all directions, in straight lines, from luminous bodies; these are reflected back from polished surfaces, exactly as billiard balls are, and being attracted by transparent media through which they pass, are drawn out of their previous direction, or undergo refraction. Many other of the known facts are explained in a somewhat similar way.

Huyghens started the other theory, that of undulations. He supposed an infinitely subtile medium or æther to fill all space and penetrate all bodies; luminous bodies excite vibrations in this æther, which spread and propagate themselves in waves, exactly like those formed by dropping a stone into still water: by this hypothesis he explained the phenomena of reflexion and refraction in a way as plausible as the other theory.

But other phenomena have presented themselves calling for explanation. The singular fact of a double refraction existing in some crystals, the colours of the thin films formed by blowing soap-bubbles, the stripes and bands of light formed on placing opaque bodies in a narrow beam of sun-light; these and other phenomena drew the attention of philosophers to the question of preference between the theories. But little real advance can be said to have been made, till our distinguished countryman, Dr. T. Young (about 1802), pointed out the beautiful principle which he termed

interference of the waves of æther: two waves propagated from opposite points may arrive at the same point either exactly at the same time, so as to conspire, and thus produce a double effect, or may follow at just such an interval as to oppose and clash, and thus mutually destroy each other. Upon this principle, which he proceeded fully to develop, he succeeded in explaining perfectly a vast range of phenomena, including all those above named. It is difficult, if not impossible, and certainly has never been done, to frame any application of the corpuscular theory which shall explain how two rays of light conspiring together shall produce, instead of a uniform double light, an alternation of dark and light spaces. But the analogy of the waves gives a perfect explanation.

A vast range of new facts have been elicited by modern research: the labours of Brewster, Malus, Arago, Fresnel, and Airy, have brought to light an immense assemblage of curious optical phenomena, all of which the undulatory theory explains in the most perfect and satisfactory manner, whilst nothing approaching to an explanation has been proposed on any hypothesis.

There are, however, a few phenomena for which no theory has as yet assigned a complete explanation. The absorption of light in such singular varieties of proportion, by different coloured media, the dark bands which are seen crossing the spaces of the prismatic spectrum, and several analogous facts are at present wholly unexplained: they have even been urged as objections against the theory of undulations; they are, however, at present no further objections than merely that they are unexplained; there is nothing to show that they may not be explained on these principles.

Another most material case is that of the unequal refrangibility of light, as exhibited by the prism. Of this fundamental fact in optics, no kind of explanation was afforded by the corpuscular theory, and (till lately) the undulatory was supposed to be absolutely at variance with it. M. Cauchy, however, has suggested a new modification of the first principles of the theory, which assigns a certain relation, by virtue of which such effects ought to take place. The verification of this theory must depend upon comparison of numerical data. As far as this has been yet done, it establishes M. Cauchy's principles in a most remarkable manner; but the data we at present possess are but scanty: researches, however, are known to be now in progress, which will, before long, throw some additional light on the subject.

DIFFRACTION OF LIGHT.

THE following experiment is recommended for exhibiting, without any apparatus, by the light of a common candle or lamp (though only on a minute scale) the phenomenon of the diffraction or interference of light.

Take a small pocket lens (such as those commonly used for magnifying insects, &c.), stretch across it, close to the glass, a piece of fine wire, then applying the eye to the other side, look through it at a distant candle, (the wire being vertical, or parallel to the length of the flame,) and the dark space, or shadow of the wire will be seen beautifully and distinctly marked by several bands, alternately dark and bright in the direction of its length, whilst it will be edged on the outside all the way by one or more light parallel bands on each side. The centre band in the shadow is always a bright one; these bands are formed by the interference of the two portions of light which come from each side of the wire and diverge into the shadow.

ANALOGIES OF LIGHT AND SOUND.

IF two pipes be pitched a little out of unison, and sounded together, they will produce not a uniform double harsh sound, but a series of regular beats or

alternations of sound and silence. So two streams of light arriving almost by the same length of route at the same point, will produce not a uniform double light, but stripes or alternations of darkness and light. The experiment is shown best in this way. Let the sun's light be admitted through a pin-hole into a dark room, (or what may be still better, let them be collected at the focus of a small lens;) provide a piece of perfectly regular plate glass, and cut it into two, so as to ensure two pieces of precisely the same thickness; lay these two pieces together on a table, and look at the image of the light reflected from them by a small magnifying lens, at a few inches' distance. By gently pressing one of the two pieces, it will be very easy to alter very slightly their inclination, and thus two images of the luminous point will be formed close together, and partly overlapping. In the part where they overlap, or where the light is double, will be seen (by the lens) a series of dark and light bands; these are produced by the interference of the two reflected rays with each other.

POLARIZATION OF LIGHT.

THE fanciful term polarization has been applied to designate a particular state or condition into which light may be brought, the reality of which is evinced by the properties which actually distinguish the light so modified, by whatever name it may be described.

Light may be polarized by various means, reflexion from the surface of a transparent medium is one of the simplest. At a certain angle, perfectly, but more or less at all angles, the effect is produced. That it is produced is evinced by several experimental methods; the simplest is to look at the reflected light through a piece of tourmaline. This is the method used in the Adelaide Street Gallery. When the tourmaline is held in one position, the light of the clouds, reflected from a plate of glass, is almost wholly obscured; whilst in other positions it appears of its natural brightness. If a piece of unannealed glass, or a plate of mica, or a plate of rock crystal, or of several other crystallized bodies be interposed between the glass plate and the tourmaline, it appears tinged with vivid colours, arranged in various bands or rings. The explanation of these colours is satisfactory and complete on the undulatory theory of light; but no other explanation has ever been imagined by the supporters of any other theory.

MOUNTAIN COTTAGES.

THEY are scattered over the valleys, and under the hill sides, and on the rocks; and even to this day, in the more retired dales, without any intrusion of more assuming buildings:

Cluster'd like stars some few, but single most,
And lurking dimly in their shy retreats,
Or glancing on each other cheerful looks,
Like separated stars with clouds between.

The dwelling-houses and contiguous outhouses are, in many instances, of the colour of the native rock, out of which they have been built; but frequently the Dwelling or Fire-house, as it is ordinarily called, has been distinguished from the barn and byer by rough-cast and white-wash, which, as the inhabitants are not hasty in renewing it, in a few years acquires, by the influence of weather, a tint at once sober and variegated. As these houses have been, from father to son, inhabited by persons engaged in the same occupations, yet necessarily with changes in their circumstances, they have received without incongruity additions and accommodations adapted to the needs of each successive occupant, who, being for the most part proprietor, was at liberty to follow his own fancy; so that these humble dwellings remind the contemplative spectator of a production of nature, and may (using a strong expression) rather be said to have grown than to have been erected;—to have

risen, by an instinct of their own, out of the native rock, so little is there in them of formality, such is their wildness and beauty. Among the numerous recesses and projections in the walls and in the different stages of their roofs, are seen bold and harmonious effects of contrasted sunshine and shadow. It is a favourable circumstance that the strong winds which sweep down the valleys, induced the inhabitants, at a time when the materials for building were easily procured, to furnish many of these dwellings with substantial porches; and such as have not this defence are seldom unprovided with a projection of two large slates over their thresholds. Nor will the singular beauty of the chimneys escape the eye of the attentive traveller. Sometimes a low chimney, almost upon a level with the roof, is overlaid with a slate, supported upon four slender pillars, to prevent the wind from driving the smoke down the chimney. Others are of a quadrangular shape, rising one or two feet above the roof; which low square is often surmounted by a tall cylinder, giving to the cottage chimney the most beautiful shape in which it is ever seen. Nor will it be too fanciful or refined to remark, that there is a pleasing harmony between a tall chimney of this circular form, and the living column of smoke ascending from it through the still air. These dwellings, mostly built, as has been said, of rough unhewn stone, are roofed with slates, which were rudely taken from the quarry before the present art of splitting them was understood, and are, therefore, rough and uneven in their surface; so that both the coverings and sides of the houses have furnished places of rest for the seeds of lichens, mosses, ferns, and flowers. Hence buildings, which in their very form call to mind the processes of nature, do thus, clothed with this vegetable garb, appear to be received into the bosom of the living principle of things, as it acts and exists among the woods and fields; and, by their colour and their shape, affectingly direct the thoughts to that tranquil course of nature and simplicity, along which the humble-minded inhabitants have, through so many generations, been led. Add the little garden with its shed for bee-hives, its small beds of pot-herbs, and its borders and patches of flowers for Sunday posies, with sometimes a choice few too much prized to be plucked; an orchard of proportioned size; a cheese-press, often supported by some tree near the door; a cluster of embowering sycamores for summer shade; with a tall Scotch fir, through which the winds sing when other trees are leafless; the little rill or household spout murmuring in all seasons; combine these incidents and images together, and you have the representative idea of a mountain cottage in this country so beautifully formed in itself, and so richly adorned by the hand of nature.—From Wordsworth's Description of the Scenery of the Lakes.

“*Cui Bono?*” “*Who gains?*”—There is hardly any equally harmless custom so offensive to me as the use of words and phrases taken from one language in the midst of a sentence written in another. But my dislike is reasonably heightened when the borrowed words and phrases are used without a correct perception of their meaning. Hardly any phrase has more frequently suffered misapplication than *cui bono*. The history of a phrase is always the best explanation, and may possibly correct the propensity to abuse this unfortunate pair of words. Cassius laid it down as a maxim, that in examining conflicting evidence as to which of two parties had perpetrated a crime, we should be guided to lay our suspicions by inquiring which party becomes a gainer by the crime. *Cui bono?* to whom is the act for an advantage? Who gains? The maxim was thus applied by Cicero to the inculpation of Clodius and the exculpation of Milo, and we have it, in Cicero's defence of Milo, handed down to us as “the Cassian maxim.”—From a Correspondent.

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THE VINE AND VINEYARDS.



[Chambéry, Savoy.]

THE vine has perhaps more frequently been the subject of notice in works not expressly devoted to botanical subjects than any other plant. It was a peculiar favourite in ancient times; and Bacchus and Osiris, who are fabled to have been the first who instructed men in the art of cultivating and drawing from it its inspiring virtues, are not among the least celebrated deities of heathen mythology. It would not be very instructive to enter into a detail of these fabulous histories. In claiming for the cultivation of the vine a high historical antiquity, it is sufficient simply to mention that, immediately after the Deluge had subsided, Noah, to use the words of the Bible, "became a husbandman, and he planted a vineyard." Proof is afforded, also, that he was not unacquainted either with the use or the abuse of the properties of the vine. It may also be stated that the spies whom Moses sent into Canaan, to examine the land, went forth at "the time of the first ripe grapes." The fruit of the vine was so much esteemed, that a higher proof could not be afforded of the plenty which the promised country contained than a cluster of grapes which they cut down at the brook of Eshcol, and two of them bore it between them on a staff to the camp. From Asia the vine was

doubtless introduced at an early period into Greece; and it could not fail to be cultivated in Italy on its first colonization or soon afterwards. Its progress through the remainder of southern Europe would be coeval with the extending influence of civilization.

Some interesting facts are connected with the geographical distribution of the vine. It is not an inhabitant of torrid climates; and this may be considered as wisely ordered; for as its juice possesses exhilarating rather than cooling qualities, the demand for it does not arise out of any natural wants; and in hot climates, indeed, it cannot be enjoyed with the same freedom as in those parts in which it is indigenous. Montesquieu said that the law of Mahomet, prohibiting wine, was a law of the climate of Arabia. Such a regulation is there in perfect accordance with the best rules for avoiding the derangement of the animal economy, while in a climate like that of northern Europe it would long since have become obsolete. Arthur Young pointed out the fact that the northern boundary of the cultivation of the vine followed an oblique direction from south-west to north-east. This is not precisely correct, but the meaning is, that, as far as the cultivation of the vine does extend, a line drawn along the limits to

which it is carried in a northern direction would reach farther north at one point than at another. This circumstance is occasioned by the temperature which exists during the summer, and not by the mean temperature of the year, or the temperature of the winter season. The mean winter temperature of London is $39^{\circ} 56$, of Manheim 33° , and of Vienna $32^{\circ} 72$. The grape is not brought into a state of perfection in the south of England, although it is at Mannheim and Vienna, where the winters are 6° or 7° colder than in the vicinity of London. But we have already hinted that it is the power and continuance of the sun's rays during summer which ripen the grape, and endow it with its most valuable properties; and accordingly Mannheim and Vienna, where the mean summer temperature is 67° and 69° , are situated in a wine-making district, while London, not having a higher mean temperature than 62° , is beyond the line which limits the successful cultivation of the vine on a large scale. The mean temperature, taking the whole of the year together, averages the same, or nearly so, for each of these three places. It follows, therefore, from the temperature during winter being higher in the vicinity of London than at Vienna, that many tender plants live in the open air here which the greater severity of the winter in the wine districts around the latter place would destroy. The vine, though requiring a comparatively high temperature to attain perfection, may therefore be considered a hardy plant. The line which separates the drinkers of wine from those whose drink is beer, naturally follows, or pretty nearly so, the limits up to which the vine is cultivated. The force of habit, however, causes some deviations. Malte Brun draws the line of separation through Belgium, Hesse, Bohemia, the Carpathian mountains, Odessa, and the Crimea. In some cases wine is a common beverage in places where the vine is not cultivated, as in some portions of the north of France and in Belgium.

Mr. Barton, a gentleman who has delivered some very interesting lectures on the 'Geography of Plants' to the members of the Chichester Mechanics' Institute, says,—“The cultivation of the vine succeeds only in those climates where the annual mean temperature is between 50° and 63° ; or the mean temperature may even be as low as 48° provided the summer heat rises to 68° . In the Old World these conditions are found to exist as far north as latitude 50° ; in the New World not beyond latitude 40° . In both hemispheres the profitable culture of this plant ceases within 30° of the equator, unless in elevated situations, or in islands, as Teneriffe, where the intensity of the heat is moderated by the atmosphere of the sea. Thus the region of vineyards occupies a band of about 20° in breadth in the Old World, and not more than half that breadth in America. In the southern hemisphere, the Cape of Good Hope just falls within the latitude adapted to the grape.”

The vine, though yielding fruit of the richest and most grateful description, is a plant so abstinent in its habits as to flourish among mere stones; and it may often be seen growing in the ruins of an old wall. The rocky limestone soils, which are found frequently on the sides of hills, are particularly adapted to its nature. The choice of the soil is of the greatest importance to the cultivator, as some soils communicate a peculiar flavour and excellence to the fruit which no management can give. Miller, in the 'Gardener's Dictionary,' says,—“The best soil for a vineyard in England is a light, sandy loam, about a foot and a half, but not more than two feet, deep above the gravel or chalk, either of which bottoms are good. If the soil be too rich, the roots are enticed downward, and the influence of the sun and air is counteracted.” It is stated by the same authority, though other horticultural writers prefer a southern aspect, that in this country an eastern

aspect is the best for the vine, as the night dews are then dissipated by the morning sun. It is added that the fruit is rarely injured by the east wind.

The vine grows wild in many parts of Europe and America, and climbs to the tops of the highest trees. Its culture has been successfully attempted in almost every part of the United States; and, in several instances, good wine has been made. It is expected that if attention be paid to some of the native varieties of the vine which are already adapted to the climate, wine may in time be extensively made for domestic consumption. In Chili the vine has been cultivated with great success; and in Mexico the attempt has also proved successful—more so than in Brazil. Champlain, an old voyager, regarded the prospects of the future inhabitants of Canada with great satisfaction on perceiving that the vines, although wild, bore tolerably good fruit. Canada, though extremely severe in winter, has a high summer temperature; and Quebec is several degrees farther south than either Mannheim or Vienna. In every part of the globe within the limits already mentioned the vine is cultivated with more or less success, either for the table or for making wine.

There are about twenty-one species of vines, which are subdivided into innumerable varieties. The French government, being desirous to bring the cultivation of the plant to the highest degree of perfection, formed a nursery at the Luxembourg a few years ago, which was placed under the superintendence of a scientific man, who collected not fewer than 1400 varieties, and he was then far from possessing all the varieties known in France, so much had the varieties been increased by the influence of soil, climate, and culture.

Loudon, in his 'Enclopædia of Gardening,' recommends the following varieties for planting in this country, either against a garden-wall or house-side:—the July black, white muscadine, white and black sweet water, small and large black, white cluster, esperione, &c. In favourable seasons, he adds, the fruit of the more hardy early sorts of vine attains a tolerable degree of maturity and flavour, but it is of little value when compared with the produce of the hot-house.

There can be little doubt but that the cultivation of the vine was introduced into this country by the Romans. Vineyards are mentioned in 'Domesday Book;' and it is known that the abbeyes and religious houses usually possessed a vineyard. The inmates of these institutions were many of them foreigners, and they contributed to render the cultivation of the vine tolerably successful. The names of several places in Kent are supposed to be derived from their having been the site of vineyards. It was in the south of England that vineyards were most numerous, but there is evidence of a vineyard as far north as Derbyshire.

In the reign of Henry II. the cultivation of the vine in England began to be neglected. Our intimate connexion with France—our actual possession indeed of a portion of the wine-growing districts of that country—contributed to produce this circumstance. But though the making of wine was no longer carried on in so extensive a manner, yet there is the testimony of Dr. Plot, Barnaby Googe, Samuel Hartlib, and others, to the fact, that during the sixteenth and seventeenth centuries a considerable quantity of native wine was still made in England from the produce of the grape. Hartlib mentions Sir Peter Ricard, who made six or eight hogsheads every year. It is stated in Miller's 'Dictionary,' that, so late as 1763, there were in the cellars of Arundel Castle, Sussex, above sixty pipes of wine, the produce of English grapes; and he quotes several examples tending to prove that, up to within about a century, native wine, made from the grape, was now and then to be met with. Hales, in his 'Practical Husbandry,' says, that he had drunk wine with Dr. Shaw, made by the latter from a little vineyard at

Kensington, which he asserted was equal in quality to some of the lighter wines of France. During the last century the Hon. Charles Hamilton made wine resembling champagne from the produce of a vineyard near Cobham, in Surrey, which was situated on the southern slope of a hill, and was planted only with the Auvernat and black-cluster grapes.

During the early part of the eighteenth century, the idea of cultivating the vine on an extensive scale, so as to supersede the necessity of having recourse to France, seems to have been very warmly entertained. One writer says—"Our gardeners find that vines are capable of being cultivated in England, so as to produce large quantities of grapes, and those ripened to such a degree as may afford a good substantial vinous juice." He will not admit that the climate of England is in any respect inferior or less favourable to the vine than that of France, but remarks—"It does not seem so much owing to the inclemency of our English air, that our grapes are generally inferior to those of France, as to the want of a just culture."

The notion that England could be made a wine-growing country was accompanied and supported by some extraordinary fallacies respecting the injury sustained by the nation in spending money abroad to procure those luxuries which our own climate failed in producing. To deal with "foreigners" was, according to the maxims then prevalent, one of the surest means of ruining the nation. Postlethwayt, who wrote about the middle of the last century, was of opinion that, if we could not succeed in producing tolerable wine from grapes, we ought to try if it might not be procured from some other native production of Great Britain. He says,—“The great expense to which this nation is put for foreign wines should induce us, methinks, to make our utmost efforts to try whether we cannot amply supply ourselves with this commodity, of which we are so fond. It is commonly objected against this attempt that our climate will not admit hereof to any considerable degree. I am afraid that has never been effectually tried; but if it has not, for want of proper management, succeeded upon the grape, I am inclined to believe that we have many other productions of Great Britain that will afford exceeding good wines.” He then notices that several gentlemen in different parts of England were at that time planting and improving vineyards, and states that some wine had been made “of good strength, and of a more delicate flavour than the best growths of France.” Alluding to the exertions which were making to produce wine from native grapes, he adds,—“It is greatly to be wished they may meet with success, since the nation pays such sums for those liquors as tend to impoverish us, and augment the strength of our rivals.” Another patriotic, but, in political and commercial matters, equally mistaken writer, in a small volume, printed in 1727, entitled the ‘Vineyard,’ and dedicated to the Duke of Chandos, also endeavoured to promote the cultivation of the vine, which, he states, “had been so long neglected to the reproach of the natives of our island, and the impoverishment of the nation in general, who have annually remitted vast sums of specie to purchase its exhilarating liquor from foreigners, which we might as well raise at home by a little industry.” Cherries, he observes, were once more rare in Italy than vines in England; and yet cherries thrive as well here as there. Among other encouraging statements which he puts forth in order to show the facility with which his favourite object could be accomplished is the following: “A farmer’s wife in Kent, about twelve years since, gathered a large quantity of unripe grapes, but finding them unfit for the market, got them pressed, intending to make vinegar thereof; and putting the liquor up into a cask set it in her cellar, which, being pretty

warm, so accelerated the ripening of the same, that, about seven months after, tapping it, in expectation of finding a tolerable vinegar therein, she was agreeably surprised to find herself deceived with a glass of brisk and sparkling wine, pleasant to the eye and grateful to the palate.”

When we see, as in the above cases, the wine obtained from English grapes compared with the best wines of France, it is necessary to recollect that at that time even the French wines were greatly inferior, in point of richness and flavour, to those of the present day. Improvements have been introduced both in the mode of culture and in the process of wine-making which have occasioned this change. The old French writers speak with admiration of the wines of Montmorency, of Argenteuil, and of Marly; and in a treatise ‘De Vineis,’ printed at Rome in 1696, a previous writer on the subject is quoted, who, setting aside the wines of Bourgogne, of Champagne, and other esteemed districts, speaks in the warmest terms of the wines of the environs of Paris, which, compared with those of the south, are detestable, and are chiefly consumed in the lowest *cabarets* outside the walls of Paris. It was with wines of this description, therefore, that the produce of our English grape was compared, and it would be no flattering distinction in such a case for the latter to be considered of a superior quality. Wine which is produced towards the northern limits of the vine-climate is not only lighter but more acid than when the fruit has received the highest qualities of richness, and been brought to full maturity by the glowing suns of a more southern latitude.

The attempt to introduce the vine in Normandy, with a view to supply the consumption of that part of France, has never succeeded. We cannot expect that it would be much more successful, even in the south of England, if attempted on a large scale. The horticultural amateur, however, may, if he be so disposed, drink wine of his own growth. Mr. Loudon has “no hesitation in saying that vineyards would succeed in various parts of England, and produce wine,” not equal to that which is produced in France, we may remark, but, as Mr. Loudon says, “equal to much of that imported from France.” The selection of a proper soil, suitable situation, and the sort of grape best adapted to the climate, are the chief means of success in this matter. The plant should be grown low, as in the north of France.

Artificial heat was not applied to the production of grapes before the beginning of the last century. In Lawrence’s ‘Fruit Calendar,’ 1718, it is stated, that at the Duke of Rutland’s, at Belvoir Castle, fires were constantly kept up, from Lady Day to Michaelmas, behind the slope-walls on which the plants were trained. The vinery of the Duke of Portland, at Welbeck, near Worksop, was the most celebrated in the country a little after the middle of the century. It was under the direction of Speechley, an horticulturist of great merit, and contained seventy different varieties of the vine, all of which were raised to the highest state of perfection. It was at Welbeck that a bunch of Syrian grapes was produced, weighing 19½ lbs. This fine specimen of fruit was sent by the Duke of Portland as a present to the Marquis of Rockingham, and was carried to Wentworth House, a distance of twenty miles, by four labourers, two of whom carried it on a staff by turns, just in the same way that the cluster of grapes was carried from the brook of Eshcol to the camp of the Israelites. This was doubtless the best way of bearing the fruit uninjured, in case of a carriage not being used. The Syrian grape is not remarkable for the excellence of its fruit, but for the enormous size of the bunches which it produces.

The art of forcing has most probably gradually

diverted the attention of gardeners from the cultivation of the vine in the open air. Mr. Loudon says, that "no kitchen-garden worth notice is now without a vinery; the fruit is produced in some vineries in every month of the year; and in the London market is to be had in the highest degree of perfection from March to January." Grapes appear to have been early in demand for the table. It is related that in 1325 the Bishop of Rochester sent the king wine and grapes, the produce of his vineyard at Halling. Grapes for the dessert are nowhere produced of so fine a quality as in the vineries in this country.

The following facts respecting the produce of the vine are taken from Miller, Loudon, and other horticultural writers:—A single vine grown as a dwarf standard, in the manner practised in the vineyards in the north of France, ordinarily produces from three to nine bunches; but by superior management in gardens in England, the number of bunches is prodigiously increased. One plant, the red *Hamburgh*, at Hampton Court, has produced 2200 bunches, averaging 1 lb each, or, in all, nearly a ton; another plant, at Valentines, in Essex, has produced 2000 bunches of nearly the same average weight. The same authorities concur in stating that the vine attains an age equal to that of the oak: a vineyard 100 years old is reckoned young. In 1789 a vine was growing at Northallerton which had once covered a space of 137 square yards; and one is mentioned at Ilford, in Essex, the stem of which was about 19 inches in girth, and the branches extended 200 feet.

The application of steam to the purposes of navigation has occasioned the introduction of large quantities of foreign grapes, which are sold in London at from 1s. to 2s. per lb. They form a pleasant repast in hot weather with a little bread. The fruit when green may be made into tarts. Verjuice and vinegar are obtained from the grape; and from some varieties a pleasant beverage may be made from a decoction of the leaves.

Raisins are nothing more than grapes dried in a peculiar manner. Twiss, who travelled in Spain and Portugal, says that in those countries they are cured by cutting the stalk of the bunches half through when the grapes are almost ripe, and being then suspended by their stalks on the vine, the sun in this state candies them, and when they are dry they are packed up in boxes. Another plan is to dip the newly-gathered grapes in ley, made from the ashes of grape-cuttings, and afterwards expose them to the sun. Swinburne, in his 'Travels through Spain,' says that the raisins on the coast of Valencia are dipped in a ley of wine and ashes.

The northern imagination is apt to be wonderfully taken with the idea of a country covered with vines and glowing with their luscious fruit, and it is ten to one if the "vine-clad hills" do not form the most prominent feature in the idea generally formed by any one who has not visited France. The vine, however, is not an object of such striking beauty in France as is generally supposed. At particular seasons it is perhaps surpassed by the hop-gardens of Kent. The common way of planting the vine is to put down one stake about four feet high to each vine. Before the foliage of the plant has made its appearance, nothing but a field of stakes is visible. "At this time," says Mr. J. M. Cobbett, in his 'Tour in France,' "the vine is ugly. It looks like currant-bushes, or any low and leafless sort of shrub." November 6th his brother, Mr. J. P. Cobbett says, in his 'Ride of Eight Hundred Miles in France,' "the vines look beautiful at this time, with all their leaves off, and loads of ripe grapes hanging upon them." This was just previous to the vintage. When this is over, the stakes to which the vines were bound are collected together in a stack, just

the same as hop-poles are in England. Mr. Cobbett remarks, "The idea of a whole country covered over with black and white grapes is a rich one; and it is but natural we should suppose the makers of Burgundy rich in proportion to the richness of the luxury they produce; but vines are subjected to so many chances, that there is not a poorer country than that which is covered with them. A frost in May will cut off the buds of a whole country of vineyard; at the end of June one really hard shower of rain effectually destroys the crop by knocking off the flower; at the end of July, or in August, a hail-storm will cut off the newly-formed fruit; and a wet autumn rots it."

It is the vineyards of Italy which are really beautiful, and which, rather than those of France, are worthy of being pictured in the choicest colours either by those who are unacquainted with the country, or those who have visited it. The last writer whom we have quoted says,—"I cannot help envying the Italians one charm that their country possesses—I mean her vines. Here the fields have rows of trees planted round them; and the trunks and branches of these trees are the supporters of the vine, the greatest embellishment that a country can possibly have. The vine is not at all the same thing here that it is in France. In France it is comparatively a humble thing. The French cut it down nearly as we cut our currants, check its vigorous and aspiring shoots, and confine them to the height of a mere stake. Here each individual tree or row of trees with the vines clambering up and hanging from the branches is an object of admiration in itself. The poplar and the common maple are the trees most commonly used to train the vine to. These trees do not so much overshadow it as most other trees would. The trees are not allowed to grow their full height. In training the vine, a main object seems to be that of directing the shoots downwards; and this in order to make them bear more fruit. The yearling shoots that are to bear fruit in the following summer are brought together in twos; each two are twisted round and round one another, cut off at a certain distance and tied together with a twig of osier. The shoots thus managed hang over the branches of the tree with their ends towards the ground. Some of them are bent outwards, in the form of a bow, the ends being tied in to the tree, or to the main stem of the vine. Others are led away from the tree, and have their ends tied to the tops of high stakes, at four or five yards off. Great taste is shown by these people in this matter. They give it all the variety that such a thing can admit of. One of the forms is particularly elegant; that in which two couples of twined shoots are brought to meet each other half way between two trees, then tied together, and their extremities bent right and left, and tied again in such a way as to make a festoon. In summer and autumn the broad leaves, tendrils, and clusters of grapes are beautiful."

When travelling between Rome and Naples, he states that "Within a few miles of Naples the vines are trained to elms or poplars, generally to poplars. These trees grow to their natural height, the side branches being lopped away just enough to let in the sunshine between them. Only think of fifty or sixty acres of land in this way; high poplars standing in rows with wide intervals; vines clambering up every tree, their long shoots led from the branches of one tree to those of another, crossing in all directions, some of them hanging down towards the ground! Luxuriant crops grow under the trees; capital wheat, now all in ear, and turning yellow; fine Indian corn, planted in drills from two to three feet apart, besides oats and beans, and other things. Thus is the land cultivated for miles before you come to Naples."

In the neighbourhood of Rome the vines are trained

nearly close to the ground: they stand in rows five or six feet apart, and in the intervals there are French beans, Indian corn, rye, or wheat.

All travellers in Italy give an equally glowing account of the beauty of the Italian vineyards. Mr. Beckford, who visited Italy fifty years ago, and whose 'Sketches' were recently published, describes as follows the luxuriant manner in which the vine grows near Lucca:—"Mounting our horses, we wound among sunny vales and enclosures with myrtle hedges, till we came to a rapid steep. We felt the heat most powerfully in ascending it, and were glad to take refuge under a continued bower of vines, which runs for miles along its summit. These arbours afforded us both shade and refreshment. I fell upon the clusters which formed our ceiling, like a native of the north, unused to such luxuries: one of those Goths, Gray so poetically describes, who

Scent the new fragrance of the breathing rose,
And quaff the pendant vintage as it grows.

I wish you had journeyed with us under this fruitful canopy, and observed the partial sunshine through its transparent leaves, and the glimpses of the blue sky it everywhere now and then admitted. I say only every now and then, for in most places a sort of verdant gloom prevailed, exquisitely agreeable in so hot a day."

The vintage has already been described in No. 100

of the 'Penny Magazine.' Mr. Beckford says, "Of the vintage in Italy you cannot imagine a pleasanter sight."

Chambery (the view of which, as given in the cut, was taken on the spot in 1835) is only a few miles from the frontiers of France. Under the empire, it was the chief town of the department of Mont Blanc; but by the treaties of 1815 it was included in the continental territories of the king of Sardinia, and is now the principal town in Savoy. The French language is more generally spoken in this part of Savoy than pure Italian. Chambery contains about 12,000 inhabitants, and is the seat of an archbishop, and of the higher courts of law. The town possesses a museum and public library, and the Royal Agricultural Academy of Savoy, which frequently publishes interesting memoirs on subjects connected with agriculture, commerce, and industry, holds its sittings here. There are barracks for nearly 4,000 troops. The valley in which Chambery is situated is highly picturesque, and the whole space between the town and the mountains in the distance is covered with the vine, which is here trained as in France.

After having given these general notions of the subject, we shall devote an article hereafter to the economy of a vineyard, and to the consideration in a commercial point of view of the vineyards of France, so as to afford a distinct notion of their importance.

MALMESBURY MARKET-CROSS.



[The Market-Cross at Malmesbury.]

MALMESBURY is one of those old towns which possess peculiar charms for the antiquary and the picturesque tourist. It is situated at the north-west extremity of

Wiltshire, out of the way of any great thoroughfare; there is but little trade or bustle in its streets; it has an ancient and decayed appearance; while its situation

on an eminence which is almost surrounded by two streams—the Newnton Water and the Avon—gives it a pleasing effect. These two streams unite near the town, and form what is termed the Lower Avon, which runs into the Severn below Bristol. Malmesbury derived its ancient splendour from its ecclesiastical institutions. The abbey, once a magnificent structure, was founded in the seventh century; it was originally a religious house or monastic retreat for a few recluses, until by grants and donations it became a stately abbey. The buildings are said to have occupied a space of forty-five acres, including the gardens and offices belonging to the monks. The town contains many relics of its monastic glory, but they have either been converted into dwelling-houses, and altered from their original appearance, or they are mere fragments, with the exception of the Abbey Church, the remains of the nave of which have been repaired, and rendered fit to be used for public worship.

The Market Cross represented in the engraving stands nearly in the centre of the town. Of this the late Mr. Cobbett says in his 'Rural Rides,' "there is a market cross in this town, the sight of which is worth a journey of hundreds of miles to see." Without going so far, however, it may be admitted to be an interesting architectural relic. It is an octangular stone building, with flying buttresses, and a richly ornamented turret, which is also octangular, with a small niche on each side, filled with figures in basso-relievo, one of which represents the Crucifixion. Leland says, "There is a right, fair, and costly piece of workmanship in the market-place, made all of stone, and curiously vaulted for poor market-folks to stand dry when rain cometh. There be eight great pillars, and eight open arches, and the work is eight square. One great pillar in the middle beareth up the vault. The men of the town made this piece of work "*in hominum memoria*," i. e. within the memory of man, or in the recollection of the existing generation. Leland wrote his 'Itinerary' in the reign of Henry VIII. "The cross was substantially repaired," says Mr. Britton, "by the late Earl of Suffolk and Lady Northwick about twenty years ago," that is, prior to 1825.

The town of Malmesbury was one of the earliest of the incorporated boroughs of England, and was also early distinguished as a place of trade. It has produced several celebrated literary characters, among whom may be mentioned William of Malmesbury, so called either because he was born in the town (which is uncertain), or (which is the most probable supposition) from his connexion with the abbey, of which he was for many years the precentor and librarian. This monkish historian is deservedly honoured by our later historical writers, who draw largely from his works. The celebrated metaphysician Hobbes was a native of Malmesbury.

In the 'Boundary Reports' (1833) it is stated—"Malmesbury is not a place of any trade, and not a considerable thoroughfare. There are no new buildings in the suburbs, nor any indications of increasing prosperity. A cloth-factory was established about twenty years ago, but it is now abandoned, and has been converted into a corn-mill. It contains very few houses which appear to be occupied by persons in independent circumstances, and has altogether the air of a place on the decline; it must now be considered as entirely an agricultural town." But in the Municipal Corporation Report it is stated that "a clothing establishment, recently revived, has given some stimulus to the demand for labour."

The late Mr. Cobbett (the strength of whose prejudices was in exact proportion to the vigour of his mind) was delighted with Malmesbury, because its ancient remains and present state supplied him with

food for the absurd idea which he used so vigorously to advocate, viz., that England was formerly much more populous than it is now. "This town," he says, "though it has nothing particularly engaging in itself, stands upon one of the prettiest spots that can be imagined. Besides the river Avon, which I went down in the south-east part of the country, here is another river Avon, which runs down to Bath, and two branches or sources of which meet here. There is a pretty ridge of ground, the base of which is a mile, or a mile and a half, wide. On each side of this ridge a branch of the river runs down, through a flat of very fine meadows. The town and the beautiful remains of the famous old abbey stand on the rounded spot which terminates this ridge; and just below, nearly close to the town, the two branches of the river meet, and then they begin to be called the Avon. The land round about is excellent, and of a great variety of forms. The trees are lofty and fine, so that, what with the water, the meadows, the fine cattle and sheep, and, as I hear, the absence of hard-pinching poverty, this is a very pleasant place."

In the Municipal Corporations Report, it is stated that "a court of record, with jurisdiction over all causes of action not exceeding 40*l.*, had fallen into disuse before the date of the governing charter," that is, before the eighth year of the reign of William III., or before the commencement of the eighteenth century. "There is," it is added, "no other court, and, consequently, no occasion for juries, except on coroner's inquests. There is no police in the town, except the parish constables, and no jail."

SIGNS.

Few casual observers are perhaps aware of the curious origin of many of the signs of public-houses, and a still smaller number remember when all shopkeepers displayed signs of a similar nature, on which, and on the iron supports, which projected far into the street, large sums were expended. In is stated in the 'Gentleman's Magazine,' 1770, that there were signs and sign-irons on Ludgate Hill which cost several hundred pounds. In a paper (No. 28) in the 'Spectator,' which the signature indicates to have been written by Addison, allusion is made to this custom, which is of remote antiquity.

The practice of the young tradesman adding to his sign that of his late master, accounts for many incongruities. This was the source of the union of the Three Nuns and a Hare, the Lock and Hope, and many others. Mirza Itesa Modeen, who travelled in England about seventy years since, describes the shoemaker as exhibiting the figure of a shoe,—the baker a loaf,—the fruiterer different kinds of fruit; but whim, or some other cause, produced various signs, of which it is not easy to discover the origin. Addison speaks of the sign of the Goat before the door of a perfumer, and the French King's Head at a sword-cutler's. In the sixth plate of Hogarth's 'Industry and Idleness,' the sign of West and Goodchild, who are silkweavers, is a rampant lion, with a cornucopia on each side. In the same artist's plate of 'Noon' the cook's shop is distinguished by a Baptist's head; and in the plate of 'Night,' in the same series, the sign of the barber's shop is, besides his pole, a hand drawing a tooth, the head being in exquisite pain, and having written underneath "Shaving, Bleeding, and Teeth drawn with a touch.—*Ecce signum.*" In Shakspeare's play of 'Richard III.' (Act iii. scene 5) occurs the passage

"Tell them how Edward put to death a citizen!
Only for saying he would make his son
Heir to the *Crown*; meaning indeed his house,
Which, by the *sign* thereof, was termed so."

The person, says Gray, here alluded to was one Walker,

a substantial citizen and grocer at the Crown in Cheap-side. The well-known sign of the Good Woman, which is a woman without a head, was a common emblem at oil-shops, and it is supposed to have been originally a large oil-jar, fancifully painted, so as to resemble a headless woman. At the present day, an oil-jar is frequently put over the door of an oil-shop by way of sign. The three balls which are affixed to the houses of pawnbrokers are jocularly said to betoken that it is two to one that the articles pledged are never redeemed. They were the arms of a set of merchants from Lombardy, who were the first who publicly lent money on pledges. From them Lombard Street derived its name, and the term Lombard was long synonymous with usurer. A dog licking a porridge-pot was formerly a usual sign at ironmongers': an instance of this now rare sign may be seen at a large ironmonger's shop in Blackfriars' Road. The barber's pole is one of the few remaining ancient shop-signs, and one which has caused much antiquarian discussion. It is supposed to represent (when barbers were surgeons also) the bleeding-stick, the black stripes being the tape wound round it. In the 'Athenian Oracle,' vol. i., p. 334, it is stated that the barber's art was so beneficial to the public, that he who first brought it up in Rome had, as authors relate, a statue erected to his memory; and it is further stated that barbers were wont to hang their basins out upon poles, that weary and wounded travellers might see from a distance to whom they might have recourse. In the 'Antiquarian Repertory' it is supposed that the party-coloured staff denoted that the master of the shop practised the art of surgery as well as the more humble art of a barber, it having been the custom with village-practitioners to put a staff into the hand of the patient who was undergoing the operation of phlebotomy: the white band is meant to represent the fillet thus elegantly twined about it. In 'Comenii Orbis pictus,' in a barber's shop, a patient under phlebotomy is depicted with a pole or staff in his hand; and that it is an ancient practice appears by an illumination in a missal of the time of Edward I. Lord Thurlow, in his speech concerning the Surgeons' Incorporation Bill, in July, 1797, stated "that, by a statute still in force, the barbers and surgeons were each to use a pole. The barbers were to have theirs blue-and-white-striped, with no other appendage; but the surgeons, which was the same in other respects, were likewise to have a gallipot and a red rag, to denote the particular nature of their vocation." The red rag is also alluded to in Gay's description of a barber's shop, in his well-known fable of the 'Goat without a Beard.' As recently as seventy years since, and perhaps even later, the shops in London displayed signs swinging across the street; but from their impeding the free circulation of air in the narrow streets, they were taken down and placed against the houses, and were, after a time, superseded by the present fashion of the name and business painted on the house. The sign of the Chequers is of great antiquity, it having been found at Pompeii, and it is still common. Brand considers that this sign was intended to make known that a game called "Tables" might be played there. From the colour, which was red, and the similarity to a lattice, it was sometimes corruptly called the "Red Lettuce," which words are frequently adopted by ancient writers to signify an alehouse. Falstaff, in the 'Merry Wives of Windsor,' speaks of "your red-lattice phrases." In an old play, called the 'First Part of Antonio and Melida*,' the following passage occurs:—"As well known by my wit as an alehouse by a red lattice." The lattice was converted into the Green Lettuce, which was formerly a public-house in Brownlow Street, Holborn; and the sign of the Green Lattice is still to be found in Billingsgate. In the

* Marston's Works, 8vo., 1633.

preface to the 'Law of Drinking,' 1617, keeping a public-house is called the well-known trade of the Ivy Bush, or Red Lattice. The Bush was so general a sign that probably from thence has arisen the proverb that "good wine needs no bush," or indication as to where it was sold. In 'Good Newes and Bad Newes,' by S. R., 4to., London, 1622, a host says,—

"I rather will take down my Bush and sign
Than live by means of riotous expense."

And it seems that anciently putting up boughs upon anything, signified that it was to be sold, which also continues to be the reason why an old besom (or birch-broom) is placed at the mast-head of a vessel that is for sale. In Dekker's 'Wonderful Yeare,' 1603, is the passage "Spied a bush at the end of a pole (the antient badge of a countrey ale-house;)" and in 'Harris's Drunkard's Cup,' p. 299, "Nay, if the house be not worth an ivie-bush, let him have his tooles about him; nutmegs, rosemary, tobacco, with other the appurtenances, and he knows how of puddle-ale to make a cup of English wine." From a passage in 'Whimzies, or, a New Cast of Characters,' 12mo., Lond. 1631, it should seem that signs in ale-houses succeeded birch-poles. In Scotland a wisp of straw upon a pole is or was the symbol of an ale-house. The owner of the Mourning Bush at Aldersgate is said to have been so affected at the decapitation of Charles I., that he paid the singular respect to his memory of having his bush painted black. It is usual in some counties, particularly Staffordshire, to hang a bush at the door of an ale-house, or, as it is there called, mug-house. Before the introduction of the present beer-shops, it was a common practice for persons who wished to sell beer at the provincial fairs and wakes to place a green branch of a tree over the door. Sir Thomas Browne considers that the human faces depicted on ale-houses for the sun and moon are relics of paganism, and that they originally meant Apollo and Diana. This has been noticed in Hudibras.

"Tell me but what's the nat'ral cause
Why on a sign no painter draws
The full moon ever but the half."

But it is stated by the Rev. S. Seyer in his 'Memoirs of Bristol,' that the Full Moon in Bristol is an extremely ancient inn. Many signs are evidently heraldic, being the arms or crest of the nobleman or gentleman in whose service the innkeeper may have formerly been. Fosbroke says that the Bell Savage is a strange corruption of the Queen of Sheba; but in the paper on 'Signs' in the 'Spectator,' the Bell Savage, of which the device was a savage man standing by a bell, is supposed to be derived from the French Belle Sauvage, on account of a beautiful savage having once been shown there; by others it is considered with more probability to have been so named, in compliment to some ancient landlady of the celebrated inn on Ludgate Hill, whose surname was Savage; as in the close rolls of the 31st year of the reign of Henry VI. is an entry of a grant of that inn to "John Frensch, Gentilman," as that inn called "Savages Ynne," alias the Bell on the Hoof. In Flecknoe's 'Ænigmatical Characters,' 1665, where speaking "of your fanatick reformers," he says, "As for the signs they have pretty well begun their reformation already, changing the sign of the Salutation of the Angel and our Lady into the Shouldier and Citizen, and the Katherine Wheel into the Cat and Wheel, so that there only wants their making the Dragon to kill St. George, and the Devil to tweak St. Dunstan by the nose to make the reformation compleat. Such ridiculous work they make of their reformation, and so zealous are they against all mirth and jollity, as they would pluck down the sign of the Cat and Fiddle, too, if it durst but play so loud as they might hear it." The sign In God is our Hope, is still to be seen at a public-house on the

western road between Cranford and Slough. Coryatt mentions the Ave Maria with verses as the sign of an ale-house abroad, and a street where all the signs on one side were of birds. M. Paris says that foresters were famous for setting up ale-houses,—hence the Green Man. The Swan with two Nicks, or Necks, as it is commonly called, was so termed from the two nicks or marks, to make known that it was a swan of the Vintners' Company, the swans of that company having two semicircular pieces cut from the upper mandible of the swan, one on each side, which are called nicks. The Bolt-in-Tun is thus explained. The bolt was the arrow that was shot from the cross-bow, the tun being a barrel which was used as a target; and as in this device the bolt is painted sticking in the bunghole, it appears not unreasonable to conclude that hitting the bunghole was as great an object in cross-bow shooting as it is to a member of a Toxophilite club to strike the target in the gold. The sign of the Three Loggerheads is two grotesque wooden heads, with the inscription, "Here we three Loggerheads be," the reader being the third. The Honest Lawyer is depicted at a beer-shop at Stepney; the device is a lawyer with his head under his arm to prevent his telling lies. The Lamb and Lark occurs at Keynsham, near Bath, and in Printing-house Lane, Blackfriars, and has reference to a proverb well known, that we should go to bed with the lamb and arise with the lark. The Eagle and Child is by some persons imagined to allude to Jupiter taking Ganymede, but others suppose that it merely commemorates the fact of a child having been carried off by an eagle. The Bull and Gate, which at first appears incomprehensible, is a corruption from the Boulogne Gate, or one of the Gates of Boulogne, and is said to have been so named in compliment to Henry VIII., who took that place in 1544. The Bull and Mouth also is considered to have a similar derivation from the Mouth or Harbour of Boulogne. The Lamb and Flag was the arms of the Knights Templars, and is still the arms of the Hon. Society of the Middle Temple. Simon the Tanner occurs as a sign in Long Lane, Bermondsey, a part of London much inhabited by tanners. The Moonrakers, which was once probably kept by a Wiltshire man, as that is a soubriquet applied to persons from that county, was formerly to be seen in Great Suffolk Street, Borough. The Well and Bucket, which was perhaps meant metaphorically to announce their inexhaustible supplies, is situate in Church Street, Bethnal Green. The Labour in Vain is attempting to wash the blackamore white. The Sun and the Thirteen Cantons is the sun shining on the cantons of Switzerland. The Black Jack, Portsmouth Street, Lincoln's Inn Fields, was so denominated from an ancient leather cup so termed. The sign of the Two Chairmen was formerly not an unfrequent emblem in London, the public-houses bearing it being at that time much resorted to by the men who carried sedan chairs; as the sign of the Running Footman in Charles Street, Berkeley Square, was probably patronised by that active but now extinct class of men, who are commemorated by Sir Walter Scott in his novel of the 'Bride of Lammermoor,' chap. xiv. The Pig and Whistle, a common sign in the north of England, is supposed to mean the elephant, the trunk of the animal being the whistle. The Hog in Armour is defined as the rhinoceros. The Devil and Bag of Nails as Pan and the Bacchanals. The Cat and Fiddle, La Catherine Fidele, meaning St. Catherine. The Cat and Wheel, the Catherine Wheel, on which St. Catherine was tortured. The Goat and Compasses, a corruption of a sign of the Puritans "God encompasseth us." The Talbot is the ancient English hound.

In the neighbourhood of the Fleet Prison, before

the year 1753, a sign of two hands joined, indicated a marriage house, or a house in which Fleet marriages were celebrated, just as Gretna Green marriages are now. These places were not all public-houses, and at some of them a person was stationed at the door to invite the passers-by to come in to be married. The marriage-houses were about sixty in number. At a trial at Shrewsbury, in 1827, in which Colonel Passingham was interested, it was proved that the books containing the registers of marriages kept at the Fleet marriage-houses, were between 500 and 600 in number, and they were upwards of a ton in weight. Fleet marriages were totally abolished by the passing of the Marriage Act in the 26th year of the reign of George II., and these register-books are now deposited in the registry of the Bishop of London.

Knocking Down in Lincoln's Inn.—At Lincoln's Inn Hall the benchers, barristers, and other members of that society dine together every day during the Law Terms. When the dinner is placed on the table, and the company are arranged to hear grace, the butler strikes three hard blows on the sideboard with a wooden mallet, and then grace is said by the chaplain. In like manner three blows are struck before the grace after dinner: this custom is called "knocking down." A circumstance similar appears to be alluded to in Sir Richard Steele's play of the 'Conscious Lovers,' (act 1, scene 1,) where the modern valet says to the old butler, "You talk as if the world was now just as it was when my old master and you were in your youth—when you went to dinner because it was so much o'clock—when the great blow was given in the hall at the pantry-door, and all the family came out of their holes in such strange dresses and formal faces as you see in the pictures in our long gallery in the country."

"Liberty, without obedience, is confusion; and obedience, without liberty, is slavery."—WILLIAM PENN.

THE history of England is emphatically the *history of progress*. It is the history of a constant movement of the public mind which produced a constant change in the institutions of a great society. We see that society at the beginning of the twelfth century in a state more miserable than the state in which the most degraded nations of the East now are. We see it subjected to the tyranny of a handful of armed foreigners; we see a strong distinction of caste, separating the victorious Norman from the vanquished Saxon; we see the great body of the population in a state of personal slavery; we see the most debasing and cruel superstition exercising boundless dominion over the most elevated and benevolent minds; we see the multitude sunk in brutal ignorance, and the studious few engaged in acquiring what did not deserve the name of knowledge. In the course of seven centuries this wretched and degraded race have become the greatest and most civilized people that the world ever saw,—have spread their dominion over every quarter of the globe,—have scattered the seeds of mighty empires over vast continents, of which no dim intimation had ever reached Ptolemy or Strabo,—have created a maritime power which would annihilate in a quarter of an hour the navies of Tyre, Athens, Carthage, Venice, and Genoa together,—have carried the science of healing, the means of locomotion and correspondence, every mechanical art, every manufacture, everything that promotes the convenience of life, to a perfection which our ancestors would have thought magical,—have produced a literature abounding in works not inferior to the noblest which Greece has bequeathed us,—have discovered the laws which regulate the motions of the heavenly bodies,—have speculated with exquisite subtlety on the operations of the human mind,—have been the acknowledged leaders of the human race in the career of political improvement. The history of England is the history of this great change in the moral, intellectual, and physical state of the inhabitants of our own island.—*Edinburgh Review*.

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DUNLUCE CASTLE, COUNTY OF ANTRIM.



[Dunluce Castle.]

THE Castle of Dunluce, about two miles from the singular and interesting curiosity, the Giant's Causeway, is one of the most important as well as picturesque remains of the kind in Ireland. It is situated on an insulated rock, of 100 feet in perpendicular height, which is separated from the mainland by a precipitous chasm of about twenty feet wide. The only way by which it can be entered is by a narrow wall, one of the supporters of the ancient drawbridge. The Rev. Mr. Hamilton, in his *Letters on the Antrim Coast*, speaking of the isolated, abrupt rock on which the castle stands, and which projects into the sea, says, "It seems as if it were split off from the terra firma. Over the intermediate chasm lies the only approach to the castle, along a narrow wall, which has been built somewhat like a bridge, from the rock to the adjoining land; and this circumstance must have rendered it almost impregnable before the invention of artillery. It appears, however, that there was originally another narrow wall which ran across the chasm parallel to the former, and that, by laying boards over these, an easy passage might occasionally be made for the benefit of the garrison." This peculiarity in the position of the castle is thus graphically described by the Rev. C. Otway in his *'Sketches in Ireland:'*—

"Reader, surely you cannot be at a loss for a drawing or print of Dunluce Castle;—take it now in hand, and observe with me the narrow wall that connects the

ruined fortress with the mainland: see how this wall is perforated, and, without any support from beneath, how it hangs there, braving time and tempest, and still needing no arch, simply by the strength of its own cemented material;—the art of man could not make such another self-supported thing: it is about eighteen inches broad, just the path of a man; don't be afraid to cross it; rest assured it won't tumble with you: it has borne many a better man,—so come on!"

The walls of the castle are built of columnar basalt, many joints of which are placed in such a manner as to show their polygonal sections. The reader will recollect that the Giant's Causeway is composed of polygonal or many-sided basaltic columns, vast masses of which are still lying on the coast, as if they had been torn up and strewed around by some convulsion: so that at the early period at which the castle was built, it would appear, so to speak, as if the architect had availed himself of the ruins of nature to aid him in his art. The base of the rock on which the ruin stands has been formed into caves by the action of the waves, some of which communicate with the castle.

There is no record of when Dunluce Castle was built. The same may be stated of many of the other ruins which lie along the extensive line of coast of the county of Antrim. It would appear, however, to have been, at an early period, the principal stronghold of a powerful family termed the M'Quillans, or, as the Irish

writers term them, the Mac Uidhlins. The M'Donnells, from Scotland, on one of their predatory excursions in the north of Ireland, entered into a league with the M'Quillans, from which event an intermarriage sprung. Afterwards, either by force or fraud, for the story is by no means clear, the M'Donnells dispossessed the M'Quillans, and secured Dunluce to themselves. From this the chief of the M'Donnells, called by the English Surly Boy, (in Irish *Somhairle Buidhe*, or Yellow Charley,) according to Camden, was driven by Sir John Perrot, lord deputy of Ireland in Queen Elizabeth's time, who secured the castle for the English. But next year Surly Boy contrived to regain possession; and on his coming to Dublin, and swearing allegiance to the crown of England, Elizabeth granted him Dunluce Castle, and a large district of country, to be held of the crown, on condition that neither he nor his men, nor his descendants, should serve any foreign power without leave; that they should restrain their people from ravaging; furnish at their own expense twelve horsemen and forty footmen for forty days in time of war; and pay to the king of England a certain number of cattle and hawks annually. The head of the M'Donnells was subsequently created Earl of Antrim; and Dunluce Castle continued to be the principal residence of the Antrim family till it fell into ruin, when they removed to Glenarm, their present residence.

"It was," says the Rev. C. Otway, "as fine a morning as ever fell from heaven when we landed at Dunluce: not a cloud in the sky, not a wave on the water: the brown basaltic rock, with the towers of the ancient fortress that capped and covered it,—all its grey bastions and pointed gables, lay pictured on the incumbent mirror of the ocean: everything was reposing—everything was still, and nothing was heard but the splash of our oars and the song of Alick M'Mullen, our guide, to break the silence of the sea. We rowed round this peninsular fortress, and then entered the fine cavern that so curiously perforates the rock and opens its dark arch to admit our boat. He must, indeed, have a mind cased up in all the commonplace of dull existence who would not, while within this cavern and under this fortress, enter into the associations connected with the scene; who could not hold communings with the 'genius loci.' Fancy, I know, called up for me the war-boats and the foemen, who either issued from or took shelter in this sea-cave: I imagined, as the tide was growling amidst the far recesses, that I heard the moanings of chained captives, and the huge rocks around must be bales of plunder landed and lodged here; and I took an interest, and supposed myself a sharer in the triumphs of the fortunate and the helplessness of the captive while suffering under the misery that bold bad men inflicted in troubled times. Landing in this cavern, we passed up through its land-side entrance towards the ruin; the day had become exceedingly warm, and going from the coolness of the cave into the sultry atmosphere, we felt doubly the force of the sun's power; the sea-birds had retreated to their distant rocks; the goats were panting under the shaded ledges of the cliffs; the rooks and choughs, with open beaks and drooping wings, were scattered over the downs, from whose surface the air arose with a quivering, undulating motion. We were all glad to retire to where, under the shade of the projecting cliff, a clear cold spring offered its refreshing waters."

It is stated that, in the year 1639, on a stormy day, the part of the castle where the kitchen was situated gave way, and the cook, with eight other servants, who were busy preparing dinner, were precipitated into the sea.

MUMMIES.

In the 2nd volume of 'Egyptian Antiquities,' just about to be published in the 'Library of Entertaining Knowledge,' is a very curious chapter regarding mummies, from which the following is taken. Herodotus is the first who described the Egyptian process of embalming:—

"There are persons whose business it is to embalm the dead, and they make this a regular profession. When a body is brought to them, they show the friends patterns of dead bodies, made in wood, and painted to represent a human likeness.

"The most elaborate style, they say, belongs to Him whose name I dare not venture to mention on such an occasion [he means Osiris: compare Herod. ii. 170]; the second is an inferior and cheaper style; and the third is a very economical one. The relations having made their choice and agreed on the terms, the embalmers begin their work; proceeding in the following manner, when they have to embalm a body in the most expensive style. With a crooked piece of iron they draw out the brain through the nostrils, and then pour in some mixture of drugs (aromatics and astringents). In the next place, they make an incision in the side with an Ethiopian stone (a piece of basalt, or possibly flint), and take out all the intestines, which they clean and drench with palm-wine, and afterwards with pounded aromatics. Finally, after filling the cavities of the body with pure myrrh pounded, with cassia and other aromatics, except frankincense, they sew the incision up. The body is then placed in nitre (*natron*) for seventy days, but not more; for this is the prescribed time. When the seventy days are past, they wash the body and wrap it all over with strips of linen, smearing them with gum, which the Egyptians generally use instead of glue. The relations, on receiving the body, have a wooden case made, resembling the human form, and in this they place the body, and deposit it in a tomb of the form of a chamber. The case containing the body is set upright against the wall.

"When the friends choose the second method, and wish to avoid expense, the process is as follows:—They fill syringes with oil of cedar, which they inject into the body through the seat, without making any incision or taking out the inner parts. The injection being prevented from returning, they lay the body in the salt for the prescribed number of days; on the last day they allow the injection to flow out, and such is its strength, that it brings with it the bowels and viscera completely dissolved. The natron destroys the flesh also, and nothing is left but skin and bones. When this is done, they give the body to the friends without doing any more to it.

"The third mode of embalming is as follows, and is used for the poorer sort. They drench the interior well with a strong injection, and after putting the body in the salt brine for the seventy days, return it to the friends."

The following account of the general appearance of an Egyptian mummy, after the lapse of many ages, forms an interesting commentary on the text of Herodotus. It is extracted from a journal of M. Villoteau, communicated to M. de Sacy:—

"The 5th October, 1800, having left Carnak, we passed to the other bank of the Nile, and encamped opposite the village of Gourney. Scarcely were we encamped, when we saw some men approach with dead bodies on their shoulders, which turned out to be mummies. They put them on the ground, and offered them for sale. One was the mummy of a female, very well preserved. As we wished to know how it had been embalmed and swathed, we took off the outer

covering, consisting of an upper and a lower part, the opening of which had been laced in front. With much care we took off a great number of bandages, which passed round the legs and feet, the thighs, the body, arms and head; and after this we began to distinguish more clearly the forms of the extremities, the head, feet, and hands, while the shape of the bosom and body were still but faintly seen.

“As we came nearer the skin, the bandages were broader, and the extremities became more distinct. At last, we could clearly distinguish the nails of the fingers and toes, the nose, mouth, and eyes. Finally, we came to a kind of envelope, which covered every part; so that we took off in a single piece the part which covered the higher division of the face, and which preserved perfectly the form of the projecting features. The other parts were more covered in proportion, but those where the embalmer had been skilful enough to fill up the form, showed us nothing but black and dry members. The shape and the colour of the nails, which were expressed on the envelop, disappeared.

“Yet all the parts of the body, though dried, retained their natural form. The hair, eyes, nose, and mouth were so well preserved, that one could easily recognise the expression of countenance which they must have produced. The hair was quite black, without any mixture of white hair, though the person appeared to have been old at the time of death. All that we could observe was, that it was a little red near the roots. The hair was well fixed, long, and divided into plaits, fastened up on the head rather carelessly; which makes me infer, that at that time the women let their hair fall down along their back in numerous tresses.

“The eyelids, lashes, and eyebrows were still in their natural state. The eyes only appeared to be slightly injured, because they were dried, and the pupil had shrunk in a little. The nose was pretty nearly in its natural state, very regularly formed, and very beautiful. The tongue was dry, and like a piece of parchment. The lips were thin, and the mouth small. The teeth appeared to be worn out through old age, and to have lost their sharpness, but they were all there, and seemed not to have been decayed. Even at the present day it is remarkable that the natives of Egypt have very good teeth, which they keep to the most advanced age. The head of this mummy presented in general a tolerably regular oval. The body had been opened on the left side of the stomach, in order to get at the entrails, and to introduce the aromatic substances; and we drew out enough to satisfy ourselves that these were resinous materials.

“This female mummy had the arms and hands extended and placed along the body, while a male mummy which we examined had the arms crossed on the breast; facts which we observed to be of regular occurrence in the female and male mummies.”

The author of the volume to which we are indebted for the above extracts thinks that Herodotus only intended to indicate the three methods of embalming most generally in use, the examination of mummies having made us acquainted with variations and details not included in his account. We may mention a few of the more remarkable of the additional facts. The brain does not appear to have been always extracted, it having been sometimes found in the skull in the form of a caky substance. When extracted, it must have been done, as Herodotus says, without opening the skull, as the dura mater has been found entire, and the falx, tentorium cerebelli, and lateral sinuses uninjured. When empty of brain, the skull is found to contain aromatic substances in the form of a coarse powder. In some skulls, otherwise empty, some insects, and the pupæ of others, have been discovered. The incision

seems to have been always made in the left side; and no instance has occurred of its having been sewn up again, as mentioned by Herodotus,—the cut surfaces of the incision are merely brought together. Some mummies appear to have been gilt. The mummy examined and described by Mr. Pettigrew seems to have been gilt all over, and parts of the gilding still remained irregularly scattered over different parts of the body. In other mummies gilding has been observed, more especially on the nails of the fingers and toes, and on the eyelids, lips, and face. In some mummies the eyes had been taken out and the cavity filled up with a compact mass of lincn, in the centre of which a little colour was used to represent the pupil; some mummies, however, were furnished with eyes of glass or porcelain. Female mummies have usually the hair long, but the males have the head, beard, and even the eyebrows shaved. Mummies regularly embalmed are not, even at this distance of time, dry and brittle, but are rather tough, and slightly flexible; and when one has been prepared in the best manner, with asphaltum, it would be a troublesome process to tear it to pieces. Some idea may be formed of the quantity of cloth employed in swathing a mummy embalmed in the best manner, from the statement that, in one instance, the weight of the bandages, including the external envelop, was 29lbs., and their total length 292 yards. In another instance the bandages weighed 35½lbs.; and in that examined at Leeds there were not less than forty thicknesses of cloth.

The other process described by Herodotus must, as being cheaper, have been more common than the other. The mummies in which no bituminous or resinous matters were used were not of course calculated to last so long as the others. Nevertheless, bodies prepared in this or some equally cheap way have been found buried at a small depth in the sands. Some of these bodies have been merely dried; others have been filled with bituminous matter, or merely covered with charcoal. The greater part of such bodies are found wrapped in pieces of coarse cloth, and in mats made of reeds and palm-leaves. Belzoni, judging from those he had seen, thought that mummies prepared in this humble way were in the proportion of ten to one of the better sort. He also concludes, with good apparent reason, that mummies of this sort were dried in the sun, after having been pickled seventy days in nitre, as mentioned by Herodotus.

Before the embalmed and swathed bodies were put into the wooden cases mentioned by Herodotus, they were enclosed in a kind of shell, consisting of a number of layers of hempen or linen cloth glued together so as to form a strong but flexible kind of board, resembling *papier mâché*. This was made in the shape of the mummy, which was introduced by a longitudinal aperture at the bottom, extending the whole length of the figure, which was afterwards coarsely stitched up with hempen thread. These cases are plastered within and without, the external surface being rudely painted with figures of beetles, ibies, &c., done with ochrous earths tempered with water, and which are easily rubbed off with the finger, except where fixed by an outer coating of gum. The upper part has the usual representation of a human face, covered with strong varnish. The outer case, or “wooden figure made to resemble the human form,” mentioned by Herodotus, is usually cut from a single block, or made with different pieces of sycamore-wood. Some of these cases are plain, and others highly ornamented with figures of sacred animals, or with paintings representing mythological subjects. There is sometimes still a second wooden case, or coffin, still more highly ornamented than the other, with gilding and painted figures secured by a strong varnish. Both the cases are made to repre-

sent a human figure, and the sex is clearly denoted by the character of the head-dress, or the presence or absence of a beard. The bottom of all the wooden mummy-cases is flattened with a projection in front, large enough to receive the thickly-bandaged feet. This affords a considerable base, on which they might conveniently be set erect in chambers high enough to receive them. Herodotus says that they were so deposited in the tombs, standing on one end against the walls, and they are very properly so placed in our museums and collections.

The last covering for the remains so anxiously preserved was a stone coffin, or sarcophagus, which, however, must have been such a vast additional expense as we can only suppose to have been incurred for kings or very wealthy persons. These coffins consist of two parts,—a large case, cut out of one piece of stone, large enough to contain the mummy with all its cases, and open at the top, and the other a lid to fit the opening. There are several specimens of these sarcophagi in the British Museum, but only one of the larger sort has a lid, which is rounded into the general outline of the human form, with a face in high relief, and a general appearance analogous to that of the wooden coffins: this coffin is of granite. There are two very large ones which have no lids: one is of a species of basalt, or perhaps breccia, and the other is a breccia similar to what the Italians call *breccia verde*. The coffin which is of this last material is a very curious and elaborate work, which has given occasion to much speculation. This sarcophagus is rounded at one end and flat at the other, the rest of it having the appearance of a large box. It is about 3 feet 10 inches in length; 4 feet 2 inches wide at the feet, and 5 feet 4 inches at the head,—the height being about 3 feet 9 inches. Both the exterior and interior surfaces of this vast coffin are sculptured with a multitude of characters and human and animal figures, which are more numerous, however, on the outside. This is a most astonishing work, when we consider the hardness of the material, the generally correct outline of the animal forms, and the minuteness of the work,—from eight to twelve hieroglyphics being in some parts included in the space of a square inch. The sculptured superficies exceeds 100 square feet (French), and the number of figures is said to be more than 21,700. The other sarcophagi have also their surfaces sculptured in the same style, but not so minutely and elaborately. Another large and similar sarcophagus (of alabaster), covered with sculptures, which afford curious illustrations of the arts, customs, and religion of the Egyptians, was brought to this country by Belzoni, and is now in the museum of Sir John Soane, who purchased it for 2000*l*. These elaborate sculptures probably record the titles, actions, and merits of the kings or heroes whose mortal remains these wonderful coffins were destined to receive. Of Sir John Soane's sarcophagus there is an account, with valuable engraved illustrations, in Britton's 'Union of Architecture, Sculpture, and Painting,' 1827.

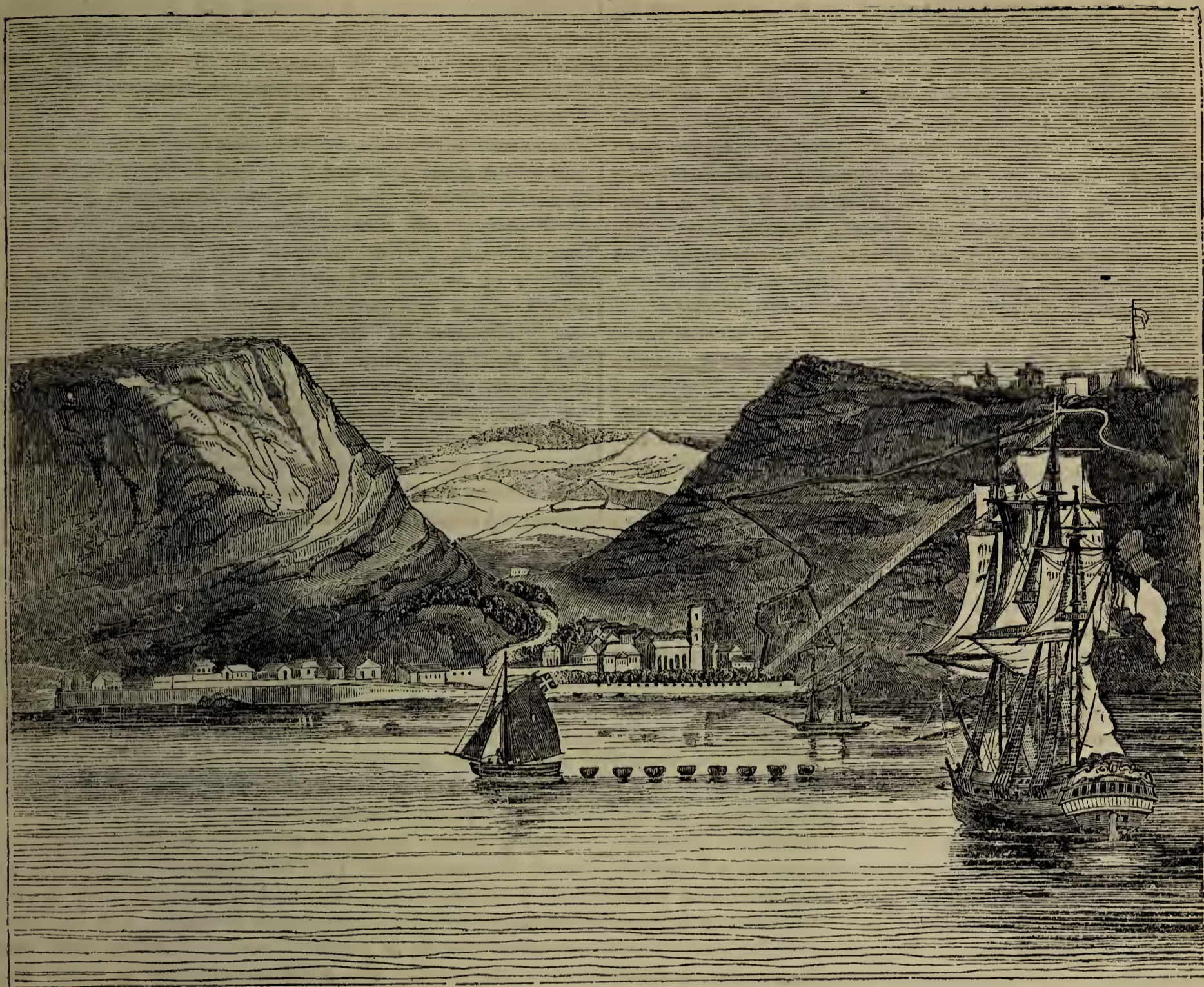
Besides these larger sarcophagi, there are two beautiful and perfect specimens in the Museum, of smaller stone coffins, one of black and the other of white marble, very highly polished. They are of a rounded form, in the outline of the human shape, and of really elegant proportions. The concave lids are sculptured, having at the top well-executed faces, one of a man and the other of a woman. These are so small that it is impossible they could have contained a wooden mummy-case. It would therefore seem that sometimes, after the mummy had been swathed, and perhaps enclosed in a pasteboard case, it was placed at once in a stone receptacle, without the intervention of the usual wooden case;—it seems indeed to have been an exchange for such a case.

ST. HELENA.

THE discovery of St. Helena by John de Nova, the Portuguese navigator, in 1502, contributed in a most important manner to facilitate the intercourse between Portugal and India. "This island," says Osaris, in his Account of De Nova's Voyage, "standing by itself in the midst of such a vast ocean, seems, as it were, to have been placed there by Providence for the reception and shelter of weather-beaten ships." The discovery of the island was made by De Nova on the 21st of May, being the anniversary of Helena, mother of the Emperor Constantine. It is believed that the Portuguese were anxious to prevent other nations availing themselves of the advantages of St. Helena, and for their own purposes they stocked it "with goats, asses, hogs, and other cattle." In the year 1515 a few Portuguese were induced by the following circumstances to prefer the solitudes of St. Helena to their native land. Alphonso Albuquerque, the governor of the Portuguese establishments in the East Indies, having obtained a victory near Goa, several of his countrymen who had deserted fell into his power. He ordered their noses, ears, right hands, and thumbs of their left hands to be cut off as a punishment for this crime, and that, in this mutilated condition, they should be sent to Portugal. They were, however, left at St. Helena with a few negroes; and poultry, partridges, pheasants, and other birds were turned adrift on the island to multiply and furnish them with subsistence. A small stock of fruit-trees and vegetables was also given to them. The resources of the island increased abundantly under the judicious management of its residents. For every ship which touched from Portugal there was a supply of fresh provisions, vegetables, and water; and those who are aware how much the efforts of the early navigators were impeded by living for a long period upon salted provisions, by which disease often rapidly enfeebled and thinned their numbers, will perceive that a resting-place in the middle of the Atlantic, abounding with the means of renewing their health and strength, would soon become an object of the highest importance to navigators, and a station which it was equally desirable to render serviceable for political reasons. Purchas says in his Pilgrims:—"It seems that God hath planted this island in convenient place for the long and dangerous Indian navigations. There the Portugals leave their sick, which stay till other ships come next year to take them." St. Helena afforded the early voyagers to the East advantages somewhat similar in degree to those which would be derived in the present day by the discovery, in the well-explored Atlantic, of an island abounding with coal, and situated half way between the coasts of Ireland and North America. Such a circumstance would at once, by means of steam-boats, render the intercourse between the United States and the United Kingdom much more rapid and extensive than it is at present. In the other case the risks of early commercial enterprise were not a little diminished by the facilities which St. Helena offered for restoring the health of a ship's crew, and by its convenience as a rendezvous in time of war for merchant-ships waiting for convoy and protection before encountering the cruizers of unfriendly ports in the European seas.

St. Helena is in the sixteenth degree of south latitude, and is six degrees west of Greenwich. It is about half way between Africa and South America, its distance from the former being 1200 miles. It is 1800 miles distant from the Cape of Good Hope; and the little island of Ascension, which is the nearest point of land to St. Helena, is at a distance of 600 miles. The extreme length of the island is ten miles and a half; its breadth six miles and three-quarters, and its total cir-

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c d
[Island of St. Helena.]

cumference about twenty-eight miles. Its area, therefore, is about 30,300 acres, not quite one-third the size of the smallest county in England.

The Portuguese had been in the constant habit of touching at St. Helena in their voyages to and from the East for a period of nearly ninety years before it was visited by an English ship. At length Sir Thomas Candish, or Cavendish, on his return from a voyage of circumnavigation, came within sight of the island, June 8th, 1588. It was then well-stocked with partridges, pheasants, turkeys, goats, and hogs; and though nothing is said of inhabitants, there was a church to which there was an approach by a "fair causeway." The valley in which the church stood is described as "extremely pleasant, and so full of fruit-trees and excellent plants, that it seemed like a very fair and well-cultivated garden, having long rows of lemon, orange, citron, pomegranate, date, and fig trees, delighting the eye with blossoms, green fruit and ripe, all at once." Here Cavendish remained twelve days. The second English ship touched at St. Helena in 1591. In 1600 the East India Company was incorporated, and the island was more frequently visited by the English. About the same time the Dutch were also in the habit of calling at St. Helena. The numerous settlements which the Portuguese had formed on both the eastern and western coasts of Africa rendered St. Helena of less importance to them than it had heretofore been, and on its being abandoned by them, the Dutch took possession of it; but in 1651 they also withdrew from the island, and established themselves at the Cape of Good Hope. The East India Company now took it into their hands, with a view of rendering it a permanent station. Fortifications were erected by the first governor in 1658, near the site of the

present Government House, immediately over the letter c in the view above. The name given to these erections was Fort James, in compliment, it is believed, to the Duke of York, afterwards James II., who was at the head of an African company. In 1672 the Dutch got possession of the island by stratagem, but in the following year it was retaken by the English; and by displaying the Dutch flag, six ships of that nation, returning from India, richly laden, were decoyed into the harbour, when four of them were taken. The island was regranted to the East India Company under a new charter, settlers were invited, and lands assigned to them. According to the tenure on which the island was held, the Company had power, if land had remained uncultivated for six months, of disposing the occupier. A salary of 100*l.* was given to the governor, and a public table was kept from the produce of certain lands cultivated for the purpose. The governor and council, with the head artificer and sergeant of the guard, dined at the same table, where they sat according to their respective ranks. Captain Poirier, who was governor in 1697, did away with this familiar admixture of ranks. A letter sent to England at the time thus alludes to the circumstance:—"This governor is of opinion that nobody ought to sit at table with him that is not cleanly dressed, or that is drunk." This important question gave occasion to a resolution of the council in 1717, in which it was laid down that, "in the governor's absence, there shall stand a salt upon the table, which shall be placed below the council and the chaplain. Those who sit above that salt shall always drink, as they think proper, either wine or punch; but those who sit below that salt shall have to two persons one common bowl of punch, which contains about three pints; if but three, the same; if four, two;

and if five, no more; or in case of wine instead thereof, one bottle for each bowl of punch."

From the end of the seventeenth century to within the last two years St. Helena has been in the possession of the East India Company. Although the scurvy is no longer dreaded by seamen, yet the island is not less visited by ships on their voyage to and from the East Indies. From 1801 to 1805 an average of 165 ships touched annually at the island: in 1823 the number which anchored in the road was 193. During the war the crews and passengers of ships stopping in the road frequently exceeded the number of the inhabitants and garrison, who were compelled to live on salt provisions; and a person could not kill his own cattle without the governor's permission. This restriction was removed when the circumstances which occasioned the adoption of such a regulation were no longer in operation. In time of peace vessels arrive singly, and there need be no delay for convoy of men-of-war.

In 1805 the population of St. Helena amounted to 3078; in 1823 to 4381: viz., whites 1201; civil and military establishment 911; slaves 1074; free persons of colour 729; Chinese 442; Lascars 24.

Nearly one-half of the island consists of waste and rugged land. Corn-growing is an object of secondary consequence, and bread is made of imported flour. The most valuable productions of the land are roots, vegetables, and live stock. The profit on land is from 7 to 8 per cent.

The price of labour is high. The wages of a carpenter are 6s. or 7s. a day; of a mason from 4s. to 5s.; of a labourer 2s. to 2s. 6d. In 1810 fifty Chinese labourers were introduced from the Company's Factory at Canton, and their services proved so valuable, that others were afterwards introduced. The terms on which they were engaged were, for labourers, 1s. per day; for mechanics 1s. 6d., exclusive of their board, which might be reckoned at another shilling. The further importation of slaves was soon afterwards forbidden. Under Sir Hudson Lowe's government it was declared that all children born of a slave woman, from and after Christmas Day, 1818, should be free, but that they should be considered as apprentices to the proprietors of the mothers, if males, until the age of eighteen years; and if females, until the age of sixteen. Masters and mistresses were recommended to enforce the attendance of free-born children at church and at the Sunday schools. These resolutions were voluntarily adopted by the inhabitants at a public meeting held August 13th, 1818.

Under the governorship of General Beatson great attention was paid to the improvement of the agricultural resources of the island. The governor himself made a series of experiments in agriculture and arboriculture, and the results were published in a local periodical, entitled 'The St. Helena Register.'

Governor Wilks, who was appointed in 1813, established a Society, one of the leading objects of which was to educate the children of the poorer classes. In 1823 there were 400 children in attendance at the different schools which had been established. The sum of 250*l.* was voluntarily contributed for this purpose. The degrading punishment of flogging was abolished, and the tread-mill introduced as a substitute; an agricultural and horticultural society was founded; a regular market established, which is the exclusive place of sale for articles of native produce. On the 5th of December, 1823, a fair and a prize show for agricultural cattle and produce were held, and a ploughing match took place. The supply of water has been rendered more abundant, and 300 tons per day may now be obtained. A great improvement has taken place in the moral character of the inhabitants, in consequence of the judicious measures of the various

individuals by whom the island was governed for the thirty or five-and-thirty years preceding 1823, and a gratifying contrast is presented to the lawless and tumultuous proceedings which had frequently occurred at an earlier period.

The most important event in the history of the island is its being chosen as the residence of Bonaparte after the termination of his continental fortunes by the battle of Waterloo. A convention was signed at Paris, August 20th, 1815, between the four great Allied Powers, by which the person of Bonaparte was intrusted to the English government, and commissioners were appointed by France, Russia, and Austria, to reside at St. Helena, whither it was determined to convey the ex-Emperor. The force of the garrison was considerably increased, and ships of war were stationed off the island during Bonaparte's residence. He landed in November, 1815, and died May 5th, 1821, at his residence at Longwood, indicated by the letter *b*, in a line above it in the view. On the 8th the body was interred, with all the honours due to a military man of the highest rank, in Slane's Valley, in a spot of his own selecting, overhung by the weeping willow. The question of applying to the English government for the remains of this great man, in order to have them deposited near the scene of his former power and glory, has been frequently touched upon in the French Chamber of Deputies; but no step has yet been taken of an official character. The last resting-place of Napoleon will long render St. Helena a scene of historical notice and interest.

"Longwood," says O'Meara, "is situated on a plain formed on the summit of a mountain, about 1800 feet above the level of the sea; and, including Dead Wood, comprises 1400 or 1500 acres of land, a great proportion of which is planted, with an indigenous tree called gum-wood. Its appearance is sombre and unpromising."

Mr. T. H. Brooke, a member of the Council of St. Helena, who has published the most complete account of the island, says,—"The appearance of St. Helena at a distance is that of an abrupt and rugged rock. A nearer approach brings to view the central eminences, which have a softer outline. A still nearer approach shuts from the view these eminences, and nothing is presented to the eye but craggy and stupendous cliffs. On nearing Munden's Point, James's narrow valley, situated between two lofty mountains, presents itself." O'Meara, in his 'Voice from St. Helena,' says, that the view of the town of St. James from the sea "resembles that of a scene at the theatre." The town has an agreeable aspect, and contains a species of the Indian banyan-tree, planted at intervals. It is entered by a gateway, forming one side of the parade, which is about 200 feet square. The Government House and other public offices are on the left side. The church (marked *d*) is a neat edifice. There are three streets, two of which contain shops, in which both the produce of Europe and the East is sold. The two ridges between which the town is situated are Rupert's on the east and Ladder Hill (marked *e*) on the west. The winding road up the latter leads to the governor's country-house. Carts and oxen pass along these roads, which are dreary and cheerless in their aspect for about a couple of miles. At length a more agreeable view presents itself;—neat dwellings, cultivated plantations, and the vegetable productions of the Old and New World flourishing together.

Diana's Peak, the highest point of a chain of hills which runs across the island, is 2700 feet above the level of the sea. The view from the summit is extremely novel, picturesque, and grand, and closes with the sea dashing against the rugged cliffs.

O'Meara, Bonaparte's medical attendant, has given

a most unfavourable account of the climate of St. Helena. "A ride of a few miles," he says, "takes a man through a new climate every half-hour. One moment becalmed in the bottom of the ravines, he experiences the heat of the tropics in a latitude of 15° 55" south;—a moment after, passing the aperture of some chasm, perspiring from every pore, the temporary lull is succeeded by a sudden and bleak blast from the mountains." Mr. Brooke says that the thermometer at James's Town seldom rises above 80°. The seasons are not divided so distinctly into dry and rainy seasons as is usual in the tropics: every month has a portion of rain. The number of cloudy days is large. O'Meara states that "one moment there is a shower of rain, accompanied by fog;—then the sky brightens, the weather clears up, and the scorching rays of a tropical sun are experienced. This continues for a time, and is then followed by a repetition of fog, rain, and mist." In 1823 the mortality, according to Mr. Brooke, was under one per cent. In 1807 the measles were very fatal, but the small-pox, which was once introduced in a similar manner, only carried off two persons. Vaccination, however, is regularly practised. Dr. Halley visited the island, in order to observe the transit of Venus; and in 1761 Dr. Maskelyne made astronomical observations at St. Helena. The elevation of the island and the serenity of the sky are said to be favourable for these objects. A view of the Observatory is given in the cut.

Vines, figs, oranges, and lemons ripen in the valleys near the sea. Gooseberries and currants do not produce fruit, but turn to evergreens. Cherries do not grow on the island. The usual culinary vegetables, such as cabbages, peas, beans, &c., are raised in large quantities. The blackberry overran the island on being introduced. The oak only flourishes in sheltered spots.

The breed of cattle and sheep is English. Rabbits, pheasants, and partridges are numerous. The shores abound with wild fowl. There are neither frogs, toads, nor snakes on the island, but a few scorpions and centipedes: the bite of the former is not dangerous. Bees have been brought, but they generally disappear, being probably driven out to sea. Whales are occasionally seen on the coast.

THE PAPER, PRINTING, AND CHEAP NEWS-PAPER TRADES AT THE END OF THE SEVENTEENTH CENTURY.

FROM a number of old printed papers, principally single sheets, which have been preserved in the British Museum, we are enabled to collect a few notices on these subjects, which may have some interest at the present moment, when the policy of the paper-duty and the stamp-duty on newspapers, as they now exist, is occupying much of the public attention.

It is unfortunate that most of the documents to which we are about to refer are without any date; but their internal evidence will generally enable us to supply this deficiency.

Before, however, coming to the subjects and the period mentioned in our title, we may state a fact respecting the business of printing in London at a somewhat earlier period, which sounds strange enough at the present day. From a paper, entitled "The Case and Proposals of the Free Journeymen Printers in and about London," and dated the 23rd October, 1666, it appears that the entire number of working printers who had served a regular apprenticeship, then resident in and about London, was no more than 140! There were, to be sure, in addition some "foreigners," as they were called, that is, workmen who had not obtained their freedom by their serving a regular apprenticeship; but they are not spoken of as very numerous. The paper is a remonstrance against any

such interlopers being allowed to be employed. According to the Population Returns for 1831, the number of printers then in the metropolis was 3628, or probably more than twenty times the number it contained in 1666.

A bill for laying a stamp-duty of a penny upon every number of a periodical publication, consisting of a whole sheet, and of a halfpenny when it consisted of only half a sheet, appears to have been first brought into Parliament in the latter part of the reign of King William, though it did not then, we believe, pass into a law. Among the loose sheets in the museum, there is one entitled 'Reasons humbly offered to the Parliament in behalf of several Persons concerned in Paper-making, Printing, and Publishing the Halfpenny Newspapers,' against this bill while it was in dependence. From this statement it appears that there were then in London five printers (that is, we must suppose, master printers) engaged in the trade of these cheap periodical publications, which is spoken of as one of very recent origin. The quantity of paper consumed by them is estimated to amount, "by a modest computation," to 20,000 reams in the year. Each of the five printers, it is stated, "pays 9s. per week duty to his Majesty, over and besides 1s. for every advertisement therein inserted, so that, by a like computation, each printer of the said halfpenny newspapers pays *communibus annis* to the king the sum of about 60*l.*, besides what the paper-maker pays."

The third objection urged against the proposed stamp-duty lets us into a little more of the statistics of the trade. It runs thus:—"For that the said newspapers have been always a whole sheet and a half, and sold for one halfpenny to the poorer sort of people, who are purchasers of it by reason of its cheapness, to divert themselves, and also to allure herewith their young children, and entice them to reading; and should a duty of three-halfpence be laid upon these mean newspapers (which by reason of the coarseness of the paper the generality of gentlemen are above conversing with), it would utterly extinguish and suppress the same." It is added that hundreds of persons and families get their bread by selling the publications in question. Many blind persons are stated to be thus employed, and "divers of them," says the account, "who are industrious, and have but a penny or three-halfpence for a stock to begin with in a morning, will before night advance it to eighteen pence or two shillings, which greatly tends to the comfortable support of such miserable, poor, and blind creatures, who sell them about the streets." An Act imposing such a stamp-duty as is here deprecated was afterwards passed in 1712, in the reign of Queen Anne, and came into operation in August of the same year. On a former occasion (see 'Penny Magazine,' vol. i. p. 147) we have noticed some of the effects produced by this impost, among which one appears to have been the discontinuance of the 'Spectator.'

Another of our documents, also without a date, is entitled 'The Case of the Paper Traders.' We believe this representation to have been called forth by a bill which was brought into parliament in the beginning of the year 1696, and eventually passed into a law. The preamble of the statement represents that "there is a bill now depending for laying 25*l.* per cent. upon paper, parchment, vellum, and pasteboard to be imported; 20*l.* per cent. on English paper, &c.; and 17*l.* 10*s.* per cent. on those goods now (in merchants' and others' hands) to be sold." It is contended, in the first place, that these duties will not produce so much as even the small sum of 18,000*l.* per annum. It is stated that there were not then in all England above 100 paper mills, and these, with the exception of that belonging to the Company, (we do not exactly know what company is meant,) making only brown paper and the coarsest

white, "do not," it is affirmed, "one with another, annually make 200*l.* worth." The Company are stated to make about 8000*l.* worth per annum. Altogether, therefore, the value of the paper annually made in England at this time was only about 28,000*l.* There are now about 700 paper mills in England, employing about 27,000 workmen, and manufacturing annually fully 1,200,000*l.* worth of paper. "The vellum, parchment and pasteboard," the statement goes on to say, "made and expended here the last year was not above 10,000*l.*" The writers add,—“The paper last year imported was not worth 40,000*l.* (and much less will be brought in if this duty be laid.)” From these several sources it is calculated that the proposed duty will bring in altogether only 17,600*l.*, from which is to be deducted the expense of the collection. A trifle more, indeed, it is admitted, may be obtained from the stocks in hand, the project of taxing which, however, is characterized as a most extraordinary one, and as wholly without precedent. The small dealers in the country, it is anticipated, must be left entirely out of consideration, as the amount that could be obtained from them would not repay the expenses of collecting it. Of merchants and wholesale dealers, from whom alone it would be practicable to collect the duty, the number is stated not to exceed thirty-five, who might, in all, have goods in hand to the value of about 16,000*l.* Upon that amount of stock the tax would be only 2800*l.*, and that, it might have been added, only for the first year.

"The paper-makers," the representation goes on to say, "are generally very poor, and now can scarce maintain their families; but when (as by this bill required) they must pay, or give security for, the duty before they sell, this manufacture will be so much lessened that most of the mills must be ruined, and the makers, with their families, become a charge to their respective parishes. The same may be said of the parchment-makers. * * * The printing trade now consumes the greatest part of the paper; but if this duty be laid, the consumption will not be half what it now is, few books but that are of absolute necessity being now printed by reason of the present advance upon paper; much less will they be able to bear the charge upon the press when so great a duty shall be laid upon the commodity. This will ruin some hundreds of booksellers, bookbinders, and printers, and others depending on that trade."

It appears that under this Act every sheet of paper that was sold to the public bore on it the king's stamp, and also that offices or shops for the retail of paper thus stamped were opened in all parts of the kingdom by commissioners appointed to see the Act carried into effect. The commissioners seem to have obtained their supplies of paper by contracting for it with certain manufacturers. This system gave great umbrage to the established dealers in the commodity, especially to the Company of Stationers; and among the documents in the Museum are various representations from them on the subject, and also replies to their complaints by the commissioners. The stationers complain of the opposition set up to them as an unfair interference on the part of the government; the commissioners, on the other hand, vindicate the system on the ground of the reduced prices at which the public were supplied with paper at their establishments. But dealers in their situation might well afford to sell their goods cheaper than others; they of course required no profits. The capital with which they traded was public capital; and they were also, no doubt, salaried by the public. The interference, therefore, was really as unfair a one as it is possible to conceive. We do not recollect to have before met with any notice of this singular scheme of finance. It appears that the two principal offices of the Commissioners were at Lincoln's Inn and in South-

wark. Some notices of the prices of paper at this date may be found in the statements of the two parties to which we have referred.

The actual produce of the duties imposed by this Act is stated in another paper, entitled 'Reasons humbly offered to the Honourable House of Commons against laying a further Duty upon Paper.' This representation appears to have been made some time after the Act of 1697 had expired, and when a bill had been brought into parliament for imposing certain new duties upon paper. The bill in question is probably that which was passed into a law on the 5th of July, 1698, under the title of 'An Act for paying to His Majesty, his heirs and successors, further duties upon stamped vellum, parchment, and paper.' The authors of the 'Reasons' state, that "the whole produce of the paper-duty from March 1, 1696 (this must be a mistake for 1697), to March 1, 1698, came but to 16,848*l.* 10*s.* 9*d.*, about one-third whereof was collected from the stock which was in the hands of tradesmen before and at the time when the Act was passed." This result may be compared with the estimate extracted from the last-mentioned paper. It was now purposed to lay a duty of 30 per cent. on French paper, in lieu of that of 25 per cent., which had expired. If this duty shall be imposed, it is contended, French paper will cost 4*s.* the ream; and it is added, "Note that two-thirds of the paper used for printing and common writing, which is rated in our books of rates at 4*s.* 6*d.* per ream, doth cost beyond sea no more than 1*s.* 3*d.* to 3*s.* per ream." With regard to foreign paper in general, it is stated that, although the high duty of 25 per cent. had expired, it was still extremely dear; and "the dearness of paper," observe the writers of the 'Reasons,' "is the only occasion that a great number of voluminous and useful books, in many sciences, now ready for the press, cannot be printed;—to the great discouragement of trade, as well as of industry and learning, very many of the profession being forced to employ themselves on trivial pamphlets."

Superstition.—“The Amaqonda Caffers have three professions—that of the 'Amaqira,' or witch-doctor; of the 'Abanisi-bamvula,' or rain-maker; and of the 'Agika,' or doctor of medicine, which may be considered the most valuable of the three. The 'Agika' is acquainted with many valuable roots, which are used both internally and as embrocations. Dr. Morgan remarks, in a paper recently read at the South African Institution, Cape of Good Hope, 'There are not many diseases peculiar to these people. The *tænia* (tape-worm) appears to be the only one that can be called endemic: dyspnœa, sicca, and rheumatism are not uncommon complaints, most probably produced by smoking noxious herbs, fatigue, and exposure to atmospheric changes. Paralysis and glandular swellings are also complaints to which they appear subject. In their treatment of disease, no regard appears to be paid to the character of the complaint; the treatment is generally loss of blood by a rough sort of operation, consisting of scarifying and drawing blood after the manner of cupping among us. Roots are infused in water which communicate a purgative quality, and sometimes an emetic root is given to the sick person. In pains and aches of the bones and limbs, they burn a preparation similar to the moxa; they have lately substituted gunpowder when it can be obtained.' They are subject to a variety of other diseases which baffle the skill of their medical advisers, who in such cases have recourse to smearing the patient with cow-dung, and keeping up his spirits with the constant excitement of dancing and singing within his hut. Should he still continue sick, he is supposed to be bewitched, and then the 'Amaqira' is called in. The medical men are well paid, and if the patient be poor, the people of the kraal where he lives are responsible for the remuneration. In fact the man who fetches a doctor usually carries with him either a calf or a quantity of beads and assagais, as an inducement for his immediate attendance.—*Steedman's Wanderings in Southern Africa.*

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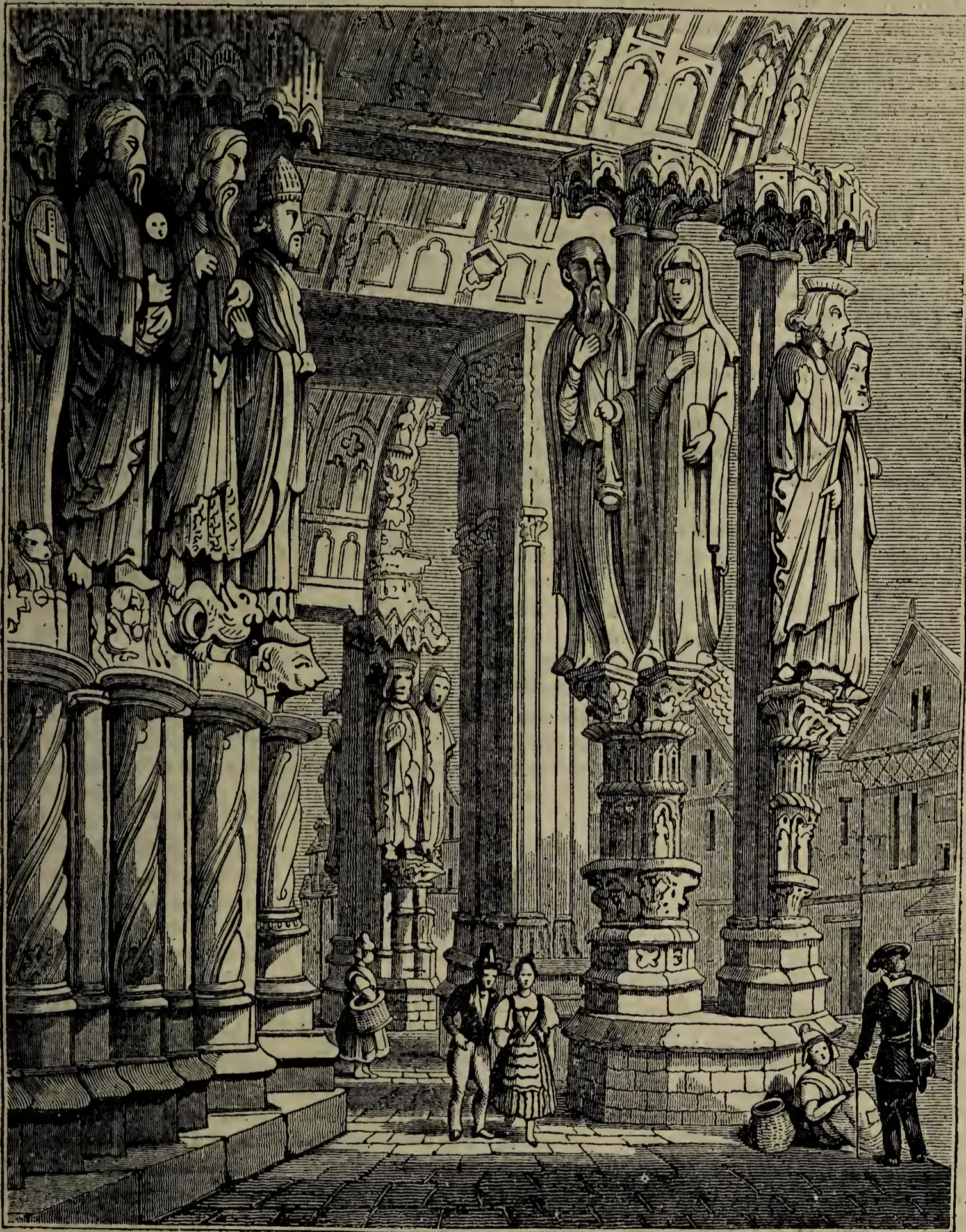
Society for the Diffusion of Useful Knowledge.

255.]

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CHARTRES.



[Porch of Chartres Cathedral.]

CHARTRES, the principal town of the department of the Eure and Loire, is about sixty-five miles south-west of Paris, on the road which passes through Versailles and Rambouillet to Tours. It is one of the oldest towns in France, and was known to the ancients under the names of Autricum and Carnutum. During the middle ages it was frequently taken and pillaged, and in the fifteenth century it was for a considerable period in the possession of the English; but it was retaken by Dunois. In 1568 the Protestant party, then in arms, besieged Chartres, but without success. In 1591, when France was torn by internal contests, the town was taken by Henry IV. Three years afterwards he was crowned in the cathedral; that of Rheims, in which this ceremony had always been performed, not being

in his possession; or, as is sometimes stated, the prelate of Rheims being considered a disaffected person, the monarch transferred his favours to Chartres. At the village of Brétigny, a short distance from Chartres, a treaty was signed between the French and English, by which the French King, who had been taken prisoner at the battle of Poitiers in 1356, was restored to his country.

The ancient defences of the town are destroyed, but the houses in many parts of it still retain the appearance which is peculiar to the domestic edifices of the middle ages, standing with their many-gabled fronts towards the narrow and crooked streets; the wood with which they are constructed exhibiting curious specimens of the carver's art. Some of the houses have little towers,

which are still more characteristic of the period referred to. The town stands on an eminence, and is divided into the upper and lower town; the former, being the most modern, contains the principal inns, the post-office, and other public buildings. Nevertheless the place of St. Peter, which is in the old town, is very agreeably ornamented by alleys of trees. The old ramparts are converted into a boulevard, which is much frequented as a promenade. The finest public walk is the Place des Barricades, which is beyond the walls. Three of the old gates are standing, the most remarkable of which is the Porte Guillaume. The communication between the upper and lower town is by pathways so steep, as totally to exclude the use of carriages; and wine, wood, coal, and other bulky articles are introduced by means of hand-barrows. The river Eure, which runs through the lower town, divides into two branches, only one of which enters within the limits of the town. The bridge was constructed by Vauban. Chartres does not possess any variety of public buildings. The Prefecture was formerly the palace of the bishop, but the Revolution has changed its destination to secular purposes. There is a statue of General Marceau, who was a native of Chartres, and while employed by the Republican government in the task of pacifying La Vendée, earned this memorial by his admirable prudence and good feeling in such difficult circumstances. The choir of the church of St. Andrew is built on an arch beneath which the Eure passes. The construction of the church is somewhat peculiar, and the stones are cemented in such a manner, that the edifice appears as if constructed out of the solid rock. The population of Chartres is above 14,000. It is the seat of a bishop, and contains several administrative offices of the first class. The public library possesses about 35,000 volumes; there are public baths, a museum of natural history, a botanic garden, a public drawing-school, and other useful institutions. Chartres is the centre of the most important corn-growing district in France, and the capital derives its chief supplies from the markets which are held here twice a week. The population is so small in comparison with the large district in which it is situated, that nearly all the corn is consumed elsewhere than where it is grown. The town is celebrated throughout the kingdom for its pies. Tanneries, dyeing-establishments, and hat-manufactories are carried on rather extensively, and the wool-trade is also of some importance.

The spires of the cathedral are visible twenty-five miles before the traveller reaches Chartres, from whatever quarter he approaches the town; and yet it is not possible to obtain a complete view of this fine old edifice, so closely is it surrounded by other buildings. One of the spires is heavy and without ornament, if we except the stones being cut like the scales of a fish, the effect of which is singular rather than pleasing. This spire seems always to be leaning, from whatever point it is viewed. This is owing to the angle which faces the spectator being so straight as to appear as if it were entirely vertical. The other spire is enriched with ornaments towards the middle; but as they are not continued throughout, the effect is not harmonious. The steeples of Chartres are about 306 feet high; that of Strasburg is 492 feet in height. There is in France an old saying to the effect that all the requisites for a perfect church would be combined by adopting the entrance of the cathedral of Rheims, the nave of that of Amiens, the choir of Beauvais, and the steeple of Chartres. The entrance to the cathedral is by a porch a portion of which is represented in the cut. The obscurity which reigns in the interior is so great, that except the day be bright, it is not possible to read small print. This is owing to the thickness of the glass, and to its being highly stained. Along the exterior of the choir there are forty-three niches, filled

with groups illustrative of Scripture history, above which are delicately executed Gothic ornaments, and beneath arabesque ornaments equally graceful. The interior part of the choir contains representations in effigy of various scenes in the life of Christ, executed in Carrara marble by Bridan; and one to commemorate a vow made by Louis XIII. in this cathedral. The choir is surrounded by a double range of lateral naves, sustained by thirty-two pillars. In the middle of the nave the pavement is laid in a spiral form, and is popularly called "la lieue," from the belief that the length of the circles, if traced from their commencement, would be equal to a league. The nave is supported by a single row of sixteen pillars; eight sustain the cross, making altogether fifty-six pillars. The principal altar is remarkable for a colossal group in marble of the Assumption of the Virgin, which was executed in 1773 by Bridan. This work had very nearly been destroyed during the Revolution, but was saved by one of the inhabitants, who proposed changing the Virgin into the Goddess of Liberty, and accordingly placed a Phrygian cap on her head. The group is supported by five columns, which stand in the lower church. This latter portion of the cathedral, previous to the destruction, during the Revolution, of the chapels and effigies which it contained, was one of the most complete of its kind in France. It is not at present generally exhibited to visitors, though highly curious and picturesque.

The Rev. G. D. Whittington's 'Ecclesiastical Antiquities of France' contains the following account of the Cathedral of Chartres:—

"The Cathedral of Chartres, one of the grandest works of the age, was rebuilt in the eleventh century by Fulbert, its bishop. This church, which is said to have been originally founded in the third century, had been frequently burnt, particularly by lightning in 1020; upon which Fulbert undertook its entire reconstruction, and the great reputation he enjoyed in France and the rest of Europe enabled him to execute it in a manner till then unknown in his country. Kanute, king of England, and Richard, duke of Normandy, were among the princes, who assisted him with contributions. Some accounts mention that he had the gratification of seeing the work finished before his death, which happened in 1028; this, however, is disproved by the epitaph upon Thierrî, or Theodoric, his successor, still existing in the church of St. Père, which ascribes the completion of the fabric to that prelate, who died in 1048. The northern part was erected afterwards, in 1060, at the expense of Jean Cormier, a native of Chartres, and physician to the king." The above he has taken from the account given by Lenoir, who derived his information from the archives of the city of Chartres, preserved in the King's Library at Paris. Mr. Whittington adds,— "The length of the Cathedral of Chartres is 420 feet; the height 108 feet; the nave is 48 feet wide, with aisles 18½ feet wide and 42 feet high. On each side of the choir the aisles are double, and the transept, which is 210 feet long, contains aisles, which seems to have been the first instance of this magnificent arrangement in France. There are seven chapels in the chevet, and the crypts and lower church are built with great art and regularity."

The splendid remains of ecclesiastical architecture which abound in France and England, and so many specimens of which have been given in the 'Penny Magazine,' may be contemplated with feelings as various as are the different degrees of taste and knowledge in those who look upon them. They cannot fail to impress the mind with a sense of the grandeur of the human intellect when it aspires to noble efforts; they show that the social condition of man was improving, and that the circumstances in which he was placed at

the period when these edifices were erected were happier than those through which he had previously passed. The Cathedral of Chartres was commenced when the human race, so far as Europe was concerned, were gathering confidence and putting some life into their movements, after the passing away of a period which they had been led to look upon as fatal to their general existence. Sismondi, alluding to this apprehension which so generally pervaded men's minds at the period alluded to, says, in his 'Fall of the Roman Empire,'—"At the end of the tenth century the almost universal expectation was then entertained of the approaching end of the world. The nearer the thousandth year from the birth of Christ approached, the more did panic terror take possession of every mind. The archives of all countries contain a great number of charters of the tenth century beginning with these words:—'Appropinquante fine mundi,' *i. e.*, as the end of the world is approaching. All the ordinary motives of action were suspended, or superseded by contrary ones; every passion of the mind was hushed, and the present was lost in the appalling future. At last, the extreme period fixed by the prophecies was passed; the end of the world had not arrived; the terror was gradually but entirely dissipated." It was at this period, observes the Rev. G. D. Whittington, that the Christians of the eleventh century "hastened to rebuild and repair their ecclesiastical structures, and the various cities and provinces—especially of France—vied with each other in a display of enthusiastic devotion. On all sides, new and more stately edifices of religion arose, and the world, according to the expression of a contemporary writer, seeming to cast off its ancient appearance, everywhere put on a white mantle of churches."

The following passages, showing the influence of circumstances on the progress of architecture, are taken from Mr. Whittington's work, and will serve to render such objects as cathedrals more interesting to the general observer:—"The style of architecture in the eleventh was the same as in the preceding centuries, though the churches were constructed on a larger scale and in a more solid manner. With a few exceptions, the oldest buildings now existing in France are to be traced to this era. The fashion in practice all over Europe continued to be a barbarous imitation of the Roman manner; but from various circumstances, in different countries, it partook of different features. The Saxon churches of England were inferior in elevation, massiveness, and magnitude to those of the Normans; and the Norman mode differed considerably from that which was adopted in the neighbourhood of Paris, and farther to the south." The author next alludes to the effects of the Crusades on the arts and manners of Europe. "They roused mankind," he says, "from the intellectual lethargy into which they had been plunged for so many centuries: they brought the different people of Europe together, and carried them into more civilized regions: the intercourse which this promoted among themselves, and the accession of light which they derived from a communication with Italy, Constantinople, and the East, gradually effected a general and visible improvement. The first crusade was soon followed by a change in the arms, dress, and architecture of every nation of Europe."

The pointed arch began to show itself in France and the neighbouring countries in the twelfth century. "In the thirteenth century," Mr. Whittington remarks, "the ecclesiastical architecture of France arrived at the utmost point of excellence which it was destined to attain in the course of the middle ages. Everything seemed to conspire, in the circumstances of the nation and of the world, to produce an interval favourable for the cultivation of the arts; and genius and talents were not wanting to make use of the happy opportunity.

The thirteenth century found the French artists a numerous and protected body, in possession of a new and beautiful style of building; the religious enthusiasm of the times, formed by the spirit of the crusades, was at its height, and the throne of France was filled by monarchs equally distinguished by their piety and their magnificence. The dissensions between the barons and their sovereign, which agitated England during the greater part of this century, increased the power and ensured the tranquillity of France. Thus were external circumstances no less favourable to the prevailing taste, and its triumph was proportionably brilliant. At this time churches, almost without number, and rivalling each other in magnificence, were rising in every part of France: at Rheims, the cathedral began to display the graceful lightness of the new style; and the cathedral of Amiens, the pride and boast of Gothic architecture, was reared."

Among the causes which contributed to the decline of this brilliant period in the history of architecture, may be assigned, according to the above writer, "the wars which the English carried into the heart of France, and the divisions and factions of the French nobility, which rendered that kingdom during the fourteenth and fifteenth centuries a theatre of bloodshed and devastation. The unfortunate sovereigns were sometimes in captivity, and generally defeated; without finances, and at the head of an exhausted state, they had as little means of promoting, as their subjects had leisure for the cultivation of the arts. The strongest expressions are used by the French writers to describe the terror and misery which pervaded the country. The peasantry were forced from their labours, whole districts were laid waste, and the towns impoverished by the heaviest imports and exactions. In the midst of these evils, which were aggravated by the sufferings of famine and pestilence, we cannot wonder that the piety of the nation was unable to display itself in the construction of religious buildings. The princes of France had more occasion to fortify their cities than to found monasteries; and when their treasuries were insufficient to maintain their armies, it is not extraordinary that they afforded but few proofs of ostentatious devotion."

STANTON DREW.

THE Druidical remains at Stanton Drew, in Somersetshire, though not equal in size and celebrity to those of Stonehenge and Avebury, in Wiltshire, are still worthy of description.

Stanton Drew is a small parish in the hundred of Keynsham, which was formerly called Stantone, and Stantune from *stean*, a stone, and *ton*, a town. The present name is said to mean the *Stone-town of the Druids*. It is about seven miles south of Bristol, on the farther side of Dundry Hill (the site of an ancient beacon); and from its being equidistant from Pensford and Chew-Magna arose the proverbial rhyme,

"———Stanton Drew,

A mile from Pensford and another from Chew."

For what purpose this and similar monuments were erected, is a point that has been much discussed; but it is considered, from the name and other circumstances, to be almost certain that this ancient structure not only belonged to the Druids, but that the village of Stanton Drew was in some measure the metropolis or seat of government of the Hædri. Druidical circles are by some antiquaries supposed to have been used to contain assemblies for purposes of religion, legislation, and other national affairs; but great difference of opinion has arisen as to what may have been the object of those rude solitary stones which have no uniformity of size or structure, and which are found at irregular dis-



[Plan of the Druidical Temple at Stanton Drew.]

tances. The great antiquity of these monuments is unquestionable, some of them being intersected and injured by Roman ways, which sufficiently proves that their original use was lost before the construction of the roads. Druidism, which is said to have been first established in this country, flourished in the time of Nero, and subsisted for a considerable time afterwards; and young men came from Gaul to Britain to be initiated in the mysteries.

It is asserted that Stanton Drew was constructed before Stonehenge; and Dr. Stukely, who visited this place about 1723, considers it to be even more ancient than Avebury. Circles of upright stones of the same nature occur in many English counties; as the Hurlers, in Cornwall—Long Meg and her Daughters, in Cumberland—in Derbyshire, Devonshire, Dorsetshire, Oxfordshire, Westmoreland; and those of Stonehenge and Avebury, in Wiltshire, are well known.

Besides some other stones, Stanton Drew consists of three circles, which, by the people in the neighbourhood, are called the "Wedding," from a tradition that as a bride and her attendants were proceeding along, they were all converted to stone. The bride and bridegroom, the fiddler and the dancers, are fancifully pointed out; and it is considered wicked to attempt to count the stones. The measures given are principally taken from an account of this place published by the Rev. S. Seyer in the year 1821; and on comparing his description with the existing state of the place in the year 1834 it was found correct. The plan given above represents the whole structure;—the black marks indicating the stones that project largely, the outlines those that are merely visible, and the small dots show those that are conjectural. The great circle (a) has a diameter of 342 feet; but as only five stones are standing in their places, the *coup d'œil* is

Fig. 1

Fig. 2



Fig. 3

Fig. 5.

[Stones at Stanton Drew.]

not striking. How many stones there were originally it is not easy to determine, those that remain being at unequal distances; and if the prostrate masses still lie where they fell, the stones could never have been regularly placed in the circle.

Dr. Musgrave, who wrote in 1718, imagines that the number of stones in this circle once amounted to 32, and possibly there may have been more. They were not perfect in his time; and they are said to have been much injured and broken, upwards of a century ago, for the purpose of mending the roads; and Dr. Stukely also mentions that they had suffered great dilapidation. Mr. Seyer thinks that there are certainly 27 stones, which vary considerably in size and shape: one is 16 feet high;—another, which is prostrate, is 11 feet high and 9 feet wide;—others are not so large, but are of a remarkable form, as Fig. 1 in the cut above. On the east side of this circle are five stones (*b*), which may have formed part of an avenue, as it is supposed that there were formerly four or five others. Still more to the east is a circle of 8 stones (*c*), the circumference of which is 150 feet distant from that of the large circle: the diameter of this circle is 94 or 96 feet. It appears by Musgrave that the eight stones were all erect in his time except one: at present four are prostrate, but they are high above the ground; and from the superior workmanship, this circle is possessed of considerable interest. Fig. 2 is 12½ feet high perpendicularly: it inclines towards the north, in which position it is supposed to have been originally placed. Fig. 3 is square and massive, and this, as well as the stone opposite, is a little out of the exact circle. The largest stone (Fig. 4, 15½ feet in length) is prostrate, and another stone is broken in several pieces. Eastward of these eight stones

are seven others (*d*), which, with the addition of three or four more, which are conjectural, are said to have been an avenue to the circle of eight. Musgrave considers that these extrinsic stones and the five others before described originally formed another circle, going round the circle of eight. Stukely supposes that this circle and the stones in question were at first five concentric circles, but this appears improbable from the number of stones required, and of which there are no traces which would justify such a conclusion. The centre of the south-west circle (*e*), called by Stukely the Lunar Temple, is 714 feet from the centre of the great circle, which distance could not be shown in the plan. The diameter is stated by Wood* to be 140 feet;—by Stukely 120 feet; and it consists of eleven or twelve stones, which are rude and irregular in appearance. North-west of this circle, a little more than 100 yards distant, is a cove, Fig. 5 (*f* in the plan), at which the Druids are supposed to have sat for judicial purposes. It is formed of three large flat stones, which are about 992 feet from the centre of the great circle, and it is not far from the church of Stanton Drew. North or north-west of the cove, and about two-thirds of a mile from the great circle, are two large stones (*g*), lying flat; and beyond the river Chew, near the road on the approach to Stanton Drew, is a stone of large dimensions, called “Hackell’s Quoit” (*h*), which was formerly computed to weigh thirty tons; but it has been broken at different times for materials to mend the roads. The local tradition is, that this immense stone was thrown into its present situation from Maes-knoll (which is called in the vicinity “Miss Knoll-tump”) by Sir John Hautville, or Hawkwell, a famous champion, the dis-

* Description of Bath.

tance being about a mile. At Maes-knoll is a barrow, which it is probable may have reference to Stanton Drew.

Dr. Stukely supposes the original number of stones to have been 160; but Seyer, with more appearance of probability, considers that they did not exceed 60; in addition to which, some few, hitherto unnoticed, are said to exist in unfrequented parts of the parish. The greater part of the stones are of magnesian limestone, but some are of red sandstone and breccia.

TANNING.

THE skins of animals would naturally suggest themselves as a covering among savage nations, and they were probably in use long before the art of converting skins into leather was known, though the origin of tanning is supposed to be of great antiquity: however, in modern times, patents have been frequently taken out for improvements in tanning, and almost every manufacturer has some peculiar method in the different stages of the business.

Leather has been applied to a great variety of purposes;—by the classical ancients it was converted into shoes, girdles, &c. Bottles were made of it in the form of the bodies of animals; and skins are used in Spain for holding wine; an instance familiar to all presents itself in Don Quixote's battle with the wine-skins: bags, buckets, (as those of the fire-engines,) garments called *camisini*, quivers, strings for musical instruments, (among the Irish,) caldrons, jerkins, surcoats, covering for shields, boats of boiled leather, tents, sails, and vessels for liquors, have been made of leather. Taylor, the water-poet, speaks of two black leather bottles, or bombards, of wine; they were also used to carry beer to soldiers on duty, and resembled black-jacks of leather. Sheep-skin pasted on wood was anciently a common binding for books.

The term hide is usually applied to the skins of horses, oxen, and cows, which are intended for the sole-leather of very stout shoes, and other substantial purposes. Skins, technically speaking, are those of calves and other animals, for upper-leather of shoes, boots, &c.

The bark used for tanning is the bark of the oak, though many other substances contain the tannin principle. The outside roughness of the bark, which is called the crut, is first taken off with a large drawing-knife; and after the crut (which is not employed in tanning) is removed, the bark is dried in a kiln and ground in a mill; the bark thus ground is then mixed with water in the pits, and forms what are called the woozes. When hides are brought to the tanner, the stoutest parts of them are selected to make butts or backs, which are for the sole-leather of very thick shoes. Ox and cow-hides are called crop-hides, and are also used for sole-leather. The first process used towards the skins of horses, oxen, &c. is to soak them in water for a few hours to get out the blood, and they are then put into pits containing lime and water, where they remain ten days or a fortnight, being taken out and in two or three times a-week: after that they are taken out and put across a beam, which is a piece of wood rather convex on the upper side, about three feet broad, and four and a half in length, one end of which rests on the ground, the other end being supported on legs at a convenient height for the workman, who spreads the hide on it, and takes the hair off with a blunt kind of drawing-knife, called a working-knife, which is curved to suit the form of the beam; this being completed, the hides are "fleshed," that is, the fat, &c. is all removed from the inside of the hide with a double-edged drawing-knife, called a flesher. The hides are then put into a weak wooze, and frequently handled, *i. e.*, drawn in

and out of the pit to prevent creases, and that they may thoroughly imbibe the tannin principle: from this weak wooze they are removed gradually to woozes stronger and stronger; and in the strongest of these they remain some days without being taken out. The same woozes are used for many hides in succession. Hides remain in the woozes from six to twelve months, according to their thickness; and, at the proper period, they are taken out of the strongest wooze and hung up to dry, and, being sufficiently hardened, they are put on an iron half cylinder, about as thick as a man's thigh, called a striking-beam, on which they are mauled or beaten with a wooden mallet. They are then rubbed on this beam with a striking-pin to give them a face; the striking-pin is of iron, with two handles, the iron being triangular or square, and in size an inch each way. When the hides are a little drier, from hanging, they are spread on a large flat stone, or iron plate, and rolled with a brass roller, five inches in diameter and nine inches in length, which is loaded with weights to the amount of a quarter or half a ton, in an iron box fixed over the roller. The hides are then gradually dried in a drying-house, and are, after that, ready for sale. The pits in which the woozes are contained are usually about seven or eight feet long by four broad, and five feet deep.

Calf-skins, and the skins of other animals intended for dressing-leather, are first put into a pit of water to get out the blood, and they are then placed in the lime-water to remove the hair, after which they are steeped in a solution of the excrement of pigeons, in pits called "grainers," to render them soft and to cleanse them from the lime. They remain in these a day or two, and are worked over with a working-knife of the same kind as that used to remove the hair, the object of this being to remove all the small hairs and the filth called the "scud," which is the technical term for the colouring matter of the hair, that of red calves being red; of black ones, black, and the like. When the skins are sufficiently soft and clean they are immersed in the woozes, where they remain three months, more or less, according to the judgment of the manufacturer. Skins are more slowly and carefully dried than hides; and they are pulled out by hand as they dry, to prevent their shrinking, and, when nearly dry, they are doubled up and beaten upon a pin-block by a man holding the skin in his hand and striking it against the pins. The pin-block is four feet in length and two in width. The pins, which are of wood, are four inches in height and an inch in diameter; they are fixed upright on the block, and are placed in rows of eight by eighteen, being 144 in all. The leathers are sorted and put into half dozens, so as to make the weight of each bundle nearly equal. They are sold to the currier, who dresses and blacks them for the upper-leather of shoes and boots, and many other purposes.

Basils, which are sheep-skins for book-binding, and of which many pocket-book covers are made, are manufactured much the same as the last, except that they are worked in bran and water or pollard and water instead of the excrement of pigeons, and that the skins are wrung to get the fat out after they have been a few days in the woozes, the skin having been put in hot water to liquify the fat first. The odd bits which are cut off to make the skins more shapely are put into pits well saturated with lime, and then tied up in bundles and dried for the gluemakers. The hair is sold to the plasterers;—the long horse-hair is collected by men who come round to buy it for stuffing chairs, mattresses, &c. When the tannin principle is exhausted, the tan is dried and fermented by being laid to heat, and then water is added to it, and a horse treads it, it being put into a mould to give it a shape. When dry it is called a turve, and is sold for fuel, as is also the crut. The

horns are disposed of to persons who collect them: the tails of the oxen and cows, as well as the tails and the lower part of the ears of the calves, are the perquisites of the tanner's men. The tails and ears of the calves are called "rumps and burs," and from their gelatinous nature they make a rich stew. The business of a tanner requires a considerable capital, from the length of time necessary to prepare the hides and skins;—a capacious yard, drying-houses, sheds, pits, and an abundant supply of water, are also indispensable.

Previously to the year 1830 there was an excise-duty on leather, but that duty was taken off by an Act of Parliament passed on the 29th of May in that year. Leather imported into this kingdom is, by a statute 3rd and 4th year of his present Majesty's reign (c. 56), made liable to a duty of 30 per cent. on the value, except in certain cases, which are otherwise specified; and skins which are not dressed are made liable to a duty of 20 per cent. on the value, except the species enumerated in the statute, which are—for a tiger-skin, 2s. 6d.; a lynx-skin, 6d.; chinchilla-skin, 3d.; elk-skin, 1s.; &c.

ON RHUBARB.

OF the many exotic plants which have been naturalized in this country, none has of late been brought into more general use, as a culinary vegetable, than the rhubarb; the fibrous parts or stems of the leaves of which, when baked, form a very agreeable substitute for the apple, at a much earlier period of the season than that in which any fruit is found to ripen in this climate. It was, indeed, occasionally cultivated for amusement in our gardens, and grown, in a few instances, for the production of its roots, which are extensively employed all over the world as medicine; but, for any other purpose, it was, until within these few years, utterly unknown. Its consumption for the table has now, however, become so universal, that whole acres are in many places devoted to its culture, and it has acquired a degree of importance which entitles it, on that account, to notice. The medicinal qualities of the species produced in England should also, we think, be more generally inquired into, as a prejudice exists against it which we believe to be entirely unfounded, and which, if removed, might render it a still more valuable article of growth.

The foreign countries from which it is obtained are chiefly the Tartarian provinces of Russia and China, some parts of the East Indies, and Asiatic Turkey, from each of which it is largely imported into Europe. Botanists distinguish its varieties under the several names of *rheum rhaponticum*, *undulatum*, *palmatum*, and *compactum*; and it is remarkable that they were for a long time greatly divided in their opinions concerning the species to which the officinal rhubarb belongs. The rhapontic was the *rha*, or *rheum*, of Dioscorides, and all the ancient Greeks and Romans, to whom the other kinds were unknown; and it continued in use until about a century ago, when the *undulatum* was considered superior, but was afterwards discarded for its competitors, which have been each in its turn alternately preferred. The sort termed *rheum palmatum* has, however, been since pronounced—upon the joint authority of both Dr. Pallas and Linnæus—to be the true Turkey rhubarb; and it is only that which demands our present attention.

The Turkey, the Russian, and even the East Indian rhubarb, it must be confessed, are more sightly to the eye, and consequently more marketable than the English: but it is well known that much artifice is used in rasping and colouring the roots, to give them such an improved outward appearance as may impose upon the druggists; and it behoves the faculty to

examine whether the griping effects so frequently complained of may not proceed from the Dutch yellow, extracted from buckthorn berries, with which they are commonly tintured. The foreign species may indeed be supposed to acquire some advantages from soil, climate, culture, and the mode of drying, but more, it may be presumed, from its superior age. The root has not been many years cultivated to any great extent in this country, and that which has been converted to medical use has usually been only from four to five or six years growth; whereas the foreign rhubarb is not taken up until it is eleven or twelve years old, which alone may perhaps be sufficient to constitute the difference: the circumstance at least seems to merit future inquiry.

We learn from authentic sources furnished by Mr. Foster, in his 'History of Voyages to the North,' that at Suchur—a province subject to the Great Khan of Tartary, where the plant flourishes with the greatest luxuriance, and from whence it is exported in vast quantities—the country is rocky and mountainous, being everywhere intersected by rivulets, the soil red, with an under-stratum of rubble; of that kind which our hop-growers here call "stone-brash;" in which land, the plants, when arrived at their full growth, are of such enormous size, that the roots often measure three-quarters of a yard in length, and are of the thickness of a man's body. They are dug up in winter, because they then contain the entire juice and virtue of their medicinal properties; those that are taken up in summer being of a light spongy texture, and unfit for use.

The root being thoroughly cleaned, and stripped of its outward coating, is cut transversely; the pieces are then placed on long tables, and turned carefully three or four times a day, that the yellow viscid juice which would otherwise exude from them, may incorporate with the substance of the root; for, if it be suffered to run out, the roots become light and unserviceable; and if they be not cut within five or six days after they are dug up, they become soft, and decay very speedily. In this state they remain for a few days, when holes are bored through them, and they are hung up on strings, exposed to the air and wind, but sheltered from the sun-beams; and thus, in about two months, they are completely dried, and arrive at their full perfection.

These directions, we apprehend, might be judiciously followed by those gardeners who cultivate the plant in this country; except that perhaps our climate is too damp to completely effect the drying process during the winter. It has therefore been recommended to use a room equally warmed by an air-stove, or else a moderately-heated oven; but we imagine the object would be equally well attained by slinging the pieces on lines hung under the roof of the kitchen. When thoroughly dry, the pieces should be rasped, to take off that shrivelled, scabrous appearance which they sometimes acquire during the operation; and it may not be improper to hint, that all the larger roots ought to be perforated through the centre, this part of the plant being the most liable to decay. They lose about two-thirds of their weight in drying; and if well prepared they should be dry, firm, and solid, but not hard or flinty, easily pulverizable, variegated on the inside with numerous pale red streaks resembling a nutmeg; appearing, when powdered, of a bright yellow colour, of a bitter astringent taste, and peculiar flavour, with an aromatic quality, manifested to the smell as well as taste.

Regarding the culture of the plant, we find numerous reports on the subject in the volumes containing the 'Transactions of the Bath and West of England Agricultural Society,' in consequence of a premium

offered some years ago by the Society for its growth and management. In these, however, nothing is stated demanding more minute detail than every gardener is acquainted with; as it is only requisite to have land of a deep, dry, and sandy staple, or what farmers call a "friable loam," and to keep it carefully free from weeds. It may be taken from the eyes or off-sets of the root, and set in the natural earth, well prepared either with rotten dung or compost, about the latter end of March, at about twelve to eighteen inches deep in the earth, and from eight to ten feet distance from each other; the latter the most advisable, if the soil be rich, as the plants will in that case completely cover it. The ground should be well hoed during the summer, and earthed up in the winter to guard the plants from the effects of frost; and if some manure be added every two or three years, it will be found to improve them. The young leaves may be cut off in the course of the spring for table use; but this should be sparingly done, when the roots are a main object, as it weakens their growth. They should be taken up in October or November; and we have seen the account of a plant, in the sixth year of its age, which rose to the height of eleven feet four inches; it grew in one day three inches, and in one night above four; many of the leaves were above five feet long, the numerous branches all covered with blossom, and then with seed. The root when taken up, clean washed, and deprived of its small and useless fibres, weighed 36 lbs.

Plants may also be raised from the seed by sowing it in a warm garden-bed, and taking up the plants in the following autumn, to be secured during the winter, and planted out in the following spring. Plants grown in this manner have at four years' growth produced 220 lbs. of dried marketable rhubarb, upon a piece of garden ground forty-four feet long by twenty-two feet wide, and divided into beds of about five feet each. The seed comes to perfection in four or five years, but should not be allowed to reach maturity, as it injures the future growth of the root: the seed-stalks should, therefore, be cut off as soon as they appear. Plants of the different varieties should also be grown separately; for if placed near each other, they will produce a mongrel species, which is afterwards incapable of future propagation: it has, however, been conjectured that these hybrids may be found to conjoin the properties of each, and thus to be susceptible of further improvement.

On the comparative medicinal qualities of the English and foreign species, numerous experiments have been made, and we have before us the results of more than forty trials of their different effects, made at the General Hospital and the pauper charity of Bath, upon patients of every age and sex by Drs. Falconer and Parry, and Mr. Farnell; the intelligent apothecary to the hospital, as well as Dr. Lettsom, and other medical men of eminence; all of whom concur in stating, that the exotic plant contains no one essential quality which is not possessed in a nearly equal degree by our own; it being, in some cases, even more effectual than the foreign sorts, especially that sort known as the East Indian. It appeared, indeed, that forty-five grains of the Turkey rhubarb contained a purgative property nearly equal to sixty of the English; or, in other words, that the latter requires to be given to the amount of about one-fourth more to produce the same effect; but some later experiments evince that it approaches nearer and nearer to the foreign rhubarb, in proportion to its age.

In addition to this, we have been told that the refuse pieces, such as small roots, or off-sets not thick enough to dry, have been used with great success in the dysenteries of cattle, when made into a strong infusion with white wine. In France, also, the recent

stem is converted into a marmalade, which constitutes a mild and pleasant laxative: it is prepared by stripping off the bark, and boiling the pulp with an equal quantity of honey or sugar.

CHINA.—No. XIII.

SILK-WORMS AND SILK (*continued*).

FROM the time when the worms leave the eggs to the period of their spinning, about twenty-four days* elapse when the process is well managed; and it is usually observed that the silk is in greater quantity and of better quality in proportion to the rapidity with which the worms are brought to the last stage. The quantity of leaves consumed will also be less, and the expense of attendants diminished. Instead of putting the worms, when ready to spin, into little cones of paper, as is done in England by those who keep silk-worms for their amusement, or, as in Italy, upon little hedges or espaliers of heath or straw, the Chinese lay them on shelves protected from the light. In this situation they draw from their mouths the silken thread in which they inclose themselves to undergo their final change. This curious and interesting operation is usually completed in four days. From 500 to 1000 yards of silk are spun in this time, at the rate of about six inches a minute, a rapidity as surprising, if the small size of the worm be considered, as is the fineness of the thread produced: the whole quantity scarcely weighing a single grain. When the cocoon, or little ball of silk, is completed, the worm once more throws off its skin, and becomes a brown chrysalis or grub, without external members, and almost without motion—a state of being well fitted for the close prison it is destined to inhabit. After remaining in this state about ten days, the sluggish chrysalis throws off its brown skin and comes forth a perfect butterfly, furnished with legs, eyes, and wings, and fitted for the enjoyment of its new state of existence. These last transformations take place within the cocoon; but the insect, now become active and comparatively powerful, makes use of its newly-found strength to burst its cell and set itself at liberty. The cocoon would be thus destroyed, the silk spoiled, and, as far as profit is concerned, all the hopes of the cultivator rendered vain, unless means were taken to prevent the last step. The death of the chrysalis is the only remedy devised, and this unfortunately necessary operation is performed in various ways. The easiest and cheapest mode is to expose the cocoons for a whole day to the heat of the sun, which effectually kills the grub, but renders the silk gummy. To avoid this, some persons boil the cocoons in water, or place them for an hour in a hot stove. This last mode is usually practised in India and in Europe by the most careful rearers; but the Chinese have a mode which they consider very superior, and which deserves a trial by other cultivators. The cocoons are placed in large earthen jars, interspersed with layers of dry salt; when the jars are full, they must be stopped so as to exclude the admission of air. By this method the chrysalis is killed in a few days, and the silk may be wound off at leisure.

A particular sort of wild silk is found in the province of Shantung. It is the produce of a caterpillar which feeds indiscriminately on the mulberry and many other trees. They do not spin cocoons like the silk-worm, but they form long threads, which being driven about by the wind, are caught by the trees and bushes, whence they are carefully gathered, and spun like flax or wool. A thick sort of cloth is woven from this silk; it is very strong and durable, does not easily spoil, and is considered very valuable.

* In Italy from thirty to thirty-two days.

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CHESTER.



[Old Houses in Chester.]

THE city of Chester is one of the most interesting places in Great Britain. It is of high antiquity, and was long occupied by the Romans as an important military station. The present state of preservation of its walls and ancient monuments render it a spot singularly curious, not only to the antiquary, but to all those who seek, in the remains of other ages, valuable instruction.

The Bishop of Cloyne, in an Essay on Roman Roads in Cheshire, in 'Lyson's Magna Britannia,' says, "Chester is one of the towns which, like London, York, Bath, and a few others, is universally allowed to be Roman. It was called Deva, from the river which runs by its walls; and as early as the time of Agricola, or at least not long after, they fixed here the head-

quarters of the twentieth legion, which, according to the military practice of the Romans, they fixed at Chester for upwards of 200 years. The different fortresses in Cheshire were garrisoned by the legionaries,—the more distant dependencies by its auxiliary cohorts, the whole amounting to near 13,000 men."

It has been contended that Chester is of British origin, and was founded long prior to the arrival of the Romans in Great Britain. This, however, is a point of no importance. There might have been a fortress or settlement on the spot, but it is highly probable that the Romans would have selected it as a military station whether it had been previously occupied or not. Drayton, in his 'Polyolbion,' (a most elaborate poem on the History, Topography, and Antiquities of England and

Wales,) thus alludes to a legend which assigns the formation of the city to the labours of a gigantic individual:—

“—— Fair Chester! called of old
Caerlegion; whilst proud Rome her conquest here did hold
Of those her legions known, the faithful station then
So stoutly held to tack by the near North-Wales men,
Yet by her own name she'd rather called be,
As her the Britons termed, the Fortress upon Dee;
Or vainly she may seem a miracle to stand,
The imaginary work of some huge giant's hand.”

Agricola, who had twice before served in Britain in a subordinate capacity, was made, about the year 78, governor-in-chief of the island; and it is extremely probable that, during his successful career, Chester, or Deva, was first permanently occupied by the Romans. The city may therefore fairly claim an antiquity of upwards of 1700 years. The remains discovered in the city clearly prove that Chester enjoyed a share of the luxury as well as the civilization of Rome. Altars, tessellated pavements, and baths have been discovered here. The Roman road, the “Via Devana,” ran directly across the island, from the Roman colony of Camalodunum, now Colchester in Essex, to Deva, or Chester, passing through the present counties of Cambridge, Leicestershire, and Stafford.

At what time the Romans abandoned Chester is not certain, but it was probably before they finally quitted Britain in the fifth century. It was then taken possession of by the natives. The first historical event connected with the city of any authenticity or importance which occurs after the departure of the Romans, is the defeat of the Britons under the walls of Chester by Ethelfrid, the Saxon king of Northumberland, about 607. In or about the year 907, Ethelred, the Earl or Duke of Mercia*, and his wife Ethelfleda, sister of King Edward the Elder, repaired the city of Chester, which had suffered much injury from the Danes, rebuilt the walls, which they are also supposed to have enlarged, and adorned with turrets. About 971, King Edgar, being with his army at Chester, was visited by six petty sovereigns, who came to pay him homage.

The Roman name of Chester—Deva—has been already mentioned. The British called it *Caer-leondufyr dwy*, “the city of legions on the waters of the Dee.” By the Saxons it was termed *Legecestre*, and *Legeacestre*. The city gave name to the county, which was formerly written *Ceastre-scyre*. *Ceastre* signifies a city, a castle, and it is to be found in the names of many places in England, such as Leicester, &c. The Latin word *castrum* signifies a camp, or military station, hence Doncaster, &c.

The celebrated Northman, Hastings, whose abilities and spirit, as a daring and enterprising adventurer, are recorded in history, was besieged in Chester by Alfred the Great, about the year 894. He had thrown himself into the place with a large army which he had raised from the East Anglians and Northumbrians. “Alfred,” says Turner, “for two days besieged them, drove away all the cattle in the vicinity, slew every enemy who ventured beyond the encampment, and burned and consumed all the corn of the district.” The siege was raised, and Hastings led his bands into North Wales, which he plundered.

At the Norman Conquest William the Conqueror gave Hugh d'Avranches, commonly called Hugh Lupus, the whole county of Chester to hold as freely by the sword as he himself held England by the crown. The Norman earldom of Chester was first granted to Gherbod, a noble Fleming, and then to Hugh d'Avranches, the king's kinsman. The grant included the entire lands

* The Mercians were divided by the Trent into North and South Mercians; the North Mercians occupied the counties of Chester, Derby, and Nottingham.—Turner.

of the palatinate, with the exception of those held by the bishop, and nearly all the Saxon proprietors appear to have been ejected. This deprivation, and the subsequent distribution of lands to the Earl's Norman followers, was finished before the year 1086, when the Domesday Survey was completed. The successors of this earl continued to exercise their mediate sovereignty for about 160 years. For this sovereignty they owed allegiance to the paramount ruler, the king of England: but that sovereign does not appear to have exercised any part of his royal prerogative within the palatinate in temporal matters, beyond the retaining a mint at Chester. The palatinate constituted, however, but a very small portion of the estates of these mighty earls. They had possessions in Stafford, Derby, Leicester, Nottingham, and Warwick, in addition to estates in Normandy. The influence and power of the Earls of Chester was extended over about a third of England. This power was too great for a subject to possess, and was incompatible with the peace of the kingdom. After the death of the seventh earl, John Scot, in 1237, King Henry III., by a violent but wise resumption, wrested the earldom from his coheirs, and united it to the crown. After this seizure the king's commissioners possessed themselves of Chester Castle, and other strongholds of the palatinate, and the earldom was afterwards given by Henry III. to his eldest son, Prince Edward, probably in 1245, on the occasion of his marriage with the princess Eleanor of Spain, when Wales, Gascony, Ireland, and other territories, were settled upon him. Two years after this, the new earl received the homage of his military tenants at Chester. The earldom of Chester has since remained as part of the titles of the eldest son of the king of England.

The Norman earls of Chester maintained a regal style within the palatinate. They had their great council or parliament, with its appropriate officers. The jurisdiction, in cases of capital felony, was not confined to the earl's court, but was also intrusted to the abbot of Combermere, to the abbot of St. Werburgh during the fair of Chester, and lastly to the courts of the eight barons, at the option of the felon, who might remove his trial to the earl's tribunal. The internal peace of the county was preserved by the perambulations of the serjeants of the peace, by the foresters in the hundreds, and forests at large, and by those of similar officers in each barony, all of whom could, in certain cases, inflict immediate punishment by decapitation.

Among the singular powers exercised by the ancient earls of Chester, was that of granting privilege or sanctuary to criminals—a power generally supposed to have belonged exclusively to the church. It was a source of emolument. As late as the reign of Henry VIII. the privilege of sanctuary in a more modified form was granted to Chester for a short period; but during the time of the Norman earls, the most infamous robbers might resort to the fair with impunity, saving the abbot's cognizance of crimes there committed.

It would be an unnecessary occupation of space to record the various historical events connected with Chester, from the Norman conquest downwards. The situation of the city necessarily rendered it an important place; and it was frequently honoured with the presence of the kings of England. It was here that Edward I. summoned Llewelyn, the last sovereign prince of Wales, to attend him to do homage, which, on his refusal, led to the war which ended in Llewelyn's destruction. During the civil war between Charles I. and the Parliament, Chester stood several sieges, or rather one continued siege of three years; the inhabitants, who had sided with the king, endured great privations; but at last, when the siege was converted

into a blockade, they surrendered on honourable terms to the parliamentary troops on the 3rd of February, 1645-6. In the reign of William III. Chester was one of the six cities appointed for the residence of an assay-master, and permitted to issue a coinage of silver. In the year 1696 it is stated that, "A mint being this year set up in Chester, coinage of money began on the 2nd of October. There was coined 101,660 ounces of wrought plate; all the pieces had the letter C under the king's head."

Chester is situated on a dry rock, elevated above the stream of the Dee, which winds round it on two sides, in an irregular semicircle. The district immediately adjacent is a rich but flat plain, exhibiting, however, interesting views. The ancient walls of the city are now only useful as a healthful and favourite walk for its inhabitants, but they are curious as the only perfect military work of the kind which the kingdom possesses. In Ormerod's 'Cheshire,' an elaborate county history, in three volumes folio, published in 1819, is the following description of the appearance and extent of the walls of Chester:—

"The walls enclose an oblong parallelogram, and most undoubtedly stand, for a large portion of their extent, on Roman foundations, as is indisputably proved by the remains of the ancient East Gate, discovered in erecting the present arch, and some relics of Roman masonry near it, still existing, but concealed from public view by the houses adjoining. The Ship Gate is also supposed to be of similar antiquity, but cannot have been any part of the original walls, if the story of the extension of the original fortifications in the direction of this gate by Ethelfleda be correct. The present circuit of the walls is somewhat more than a mile and three-quarters: the materials are a red stone; the exterior elevation is tolerably equal, but the interior is, in some places, nearly level with the ground, and in others with the tops of the houses. The entire line is guarded with a wooden rail within, and a stone parapet without; and the general line, which is kept in repair as a public walk, commands interesting prospects, among which may be specified the views towards the Forest Hills from the eastern front, towards North Wales and the Dee from the opposite one, and a fine view of the bridge and river, with the surrounding country, from the south-east angle. A very large proportion, however, of the eastern front, and a part under the castle, are completely blocked up by contiguous buildings.

"At the sides of the walls are the remains of several ancient towers, which have either been made level with the walls, been completely dismantled, or been fitted up as alcoves by the citizens.

"At the north-east angle is a lofty circular tower, erected in 1613, and called the Phoenix Tower, observable from the circumstance of Charles I. having witnessed a part of the battle of Rowton Heath from its leads in 1645. Another tower, of higher antiquity, and the most picturesque of the military remains of Chester, projects out at the north-west angle, and is approached by a small turret, called Bonwaldesthorpe's Tower, which forms the entrance to a flight of steps, leading to an open gallery embattled on each side. Below this is a circular arch, under which the tide flowed before the embankment of the Dee. At the end of the gallery is the principal tower, a massy circular building of red stone, embattled; the principal room is an octagonal vaulted chamber, in the sides of which were pointed arches for windows. This tower, now called the Water Tower, and formerly the New Tower, was erected in 1322, for 100*l.*, at the city expense, by John Helpstone.

"The principal gates of the city of Chester are four, facing the cardinal points, and severally named the Bridge Gate (on the south side), the East Gate, the

North Gate, and the Water Gate; the last situate on the west side of the city*."

Formerly, there were two citizens annually chosen, under the name of "Muragers," to overlook and repair the walls, who were paid by a small duty upon Irish linens imported into the city by the Dee, which was called the "Murage Duty." The expenses of repairing the walls are now defrayed wholly by the corporation.

The Bridge Gate was taken down in 1781, and the present gate then substituted, consisting of a handsome central arch, with two small arches at the sides for the foot-passengers. The North Gate was demolished in 1808, and a gate of Doric architecture, consisting of a wide central arch, divided from two smaller ones at the sides by couples of pillars, was erected at the expense of Earl Grosvenor†. The North Gate, at the period of its demolition, was a dark, narrow, inconvenient passage, under a pointed arch, over which was a mean and ruinous gaol, equally inconvenient. The custody of this gate was from time immemorial confided to the care of the citizens. For an account of the tenure by which it was held, and which was the origin of the custom of devolving on the sheriffs of Chester the execution of all criminals for both city and county, see p. 127. The custody of the Water Gate was purchased by the corporation, in 1778, from the Earl of Derby. The present gate was erected on the site of the old one in 1788, and consists of a wide and lofty arch thrown over the Water-gate Street, where a rapid descent adds much to its apparent elevation.

Within the walls, the city is subdivided by four principal streets, drawn from the gates, and intersecting at right angles. These streets retain numerous old timber buildings, which give them an unusual and impressive appearance. The streets are much wider in general than those in many other cities of equal antiquity.

Chester Cathedral was founded within the site of the Benedictine Abbey of St. Werburgh. It stands on the east side of North-gate Street. All authorities agree that, in the reign of King Athelstan, a monastery of secular canons was established here, in honour of St. Werburgh and St. Oswald. These canons, at the period of the Domesday Survey, retained possession of the abbey, and of the lands with which the liberality of the Saxon monarchs and the governors of Mercia had enriched them. The conventual buildings occupied nearly, if not totally, one-fourth of the city, and were bounded by the city walls on the north and east, and, with perhaps some slight exceptions, by the North-gate and East-gate Streets on the remaining sides. The cathedral is a spacious and irregular building, composed of the red stone of the county, and was nearly entirely built or rebuilt during the reigns of Henry VI., VII. and VIII. In the cloisters and buildings adjacent, particularly in some doorways now closed up, may be found very interesting specimens of Norman architecture, and the early decorations of the pointed style. "The western front, and some other detached parts, exhibit equally beautiful specimens of the enriched Gothic near the time of the dissolution; and the space occupied by the entire range of the conventual buildings furnishes a magnificent idea of the grandeur of the establishment. This effect is however injured by the want of vaulting in the nave, choir, and south transept, which was probably interrupted by the dissolution, and by the nature of the stone, which, partly from its friability, and partly from its exposure to the sea-breezes, has long lost the greater part of its external ornaments. The progress of ruin is aided by the great inequalities which progressive decay has made in the surface.

* Ormerod's 'Cheshire,' vol. i., p. 279.

† Earl Grosvenor is now Marquis of Westminster.



[Watergate Street, with an external View of the "Rows."]

Every exertion has of late years been made by the Chapter, under the auspices of the late Dean, in perfecting substantial and even ornamental repairs; but it is to be feared that the general decay is far beyond any restoration which the slender funds of the cathedral can supply; and the lapse of another century will probably level a considerable portion of the venerable fabric with the ground*."

The kingdom of Mercia was originally divided into five bishoprics, of which Chester was one. About the year 785 the bishopric of Chester became incorporated with Lichfield. In 1075 the Bishop of Lichfield removed his episcopal seat to Chester. After his decease his successor removed to Lichfield, and Chester remained without a bishop until after the dissolution of the monasteries.

The present bishopric of Chester was erected upon the dissolution of the abbeys, in the 33rd of Henry VIII., 1541. The then first bishop of Chester was a John Bird, who had been a friar of the order of the Carmelites. Several eminent men have held the see of Chester, among whom may be mentioned Brian Walton, the celebrated editor of the Polyglot Bible, &c., and John Wilkins, whose share in founding the Royal Society is well known.

Chester has long been celebrated for the architectural peculiarity in the construction of many of the old houses, known by the name of "rows." To a stranger these rows appear very singular things. It is difficult to convey a clear idea of the Chester Rows by a description. A reference to the engravings will enable the reader to understand the description better. The rows may be termed a sort of gallery, arcade, or piazza, up one pair of stairs. These galleries at present occupy

* Ormerod's 'Cheshire.'

the greatest part of both sides of Eastgate Street, and the upper part of both sides of Watergate and Bridge Streets. They run along what would be the first floor of the houses, reaching from street to street, open in front, and balustraded. Beneath the galleries or rows are shops or warehouses on the level of the street; and at occasional intervals there are flights of steps leading into the rows. The upper stories over the rows project to the streets, and are on a level with the shops and warehouses below. Mr. Pennant supposed these rows to have been the same with the ancient vestibules, and to have been a form of building preserved from the time that the city was possessed by the Romans. Mr. Ormerod gives a simpler conjecture. Their origin is accounted for on the principle of erecting galleries, from which the citizens might protect themselves from a sudden inroad of cavalry. In Leland's time there was a street in Bridgnorth which had a gallery along its extent, similar to the rows in Chester. The following description is taken from the 'Vale Royal,' published originally in 1656:—

"The buildings of this city are very ancient, and the houses be builded in such sort, that a man may go dry from one place of the city to another, and never come in the street, but go as it were in galleries, which they call the rows, which have shops on both sides, and underneath, with divers fair stairs to go up or down into the street; which manner of building I have not heard of in any other place of Christendom. Some will say that the like is at Padua, in Italy; but that is not so, for the houses at Padua are built as the suburbs of this city be, that is, on the ground, upon posts, that a man may go dry underneath them, like as they are at Billingsgate, in London, but nothing like to the rows. It is a goodly sight to see the number

of fair shops that are in these rows, of mercers, grocers, drapers, and haberdashers, especially in the street called the Mercers' Row; which street, with the Bridge Street, (being all one street), reacheth from the High Cross to the bridge, in length 380 paces in geometry, which is above a quarter of a mile."



[Interior of a Chester "Row."]

The erection of the castle of Chester is ascribed to William the Conqueror in 1069. It has of course the palace of the earldom, as well as its stronghold, and retained much of the appearance of this mixed character until the recent alterations. The castle is situated near the south-west angle of the city walls. The upper ward is on very high ground, defended by natural precipices on the south and west, and by an artificial elevation on the north. It retains one square tower, which was probably erected before the assumption of the earldom into the hands of the crown, and it is also likely that the castle of the Norman earls occupied the advantageous site of that ward only.

Before the alterations, the castle, as described by Pennant, was composed of two wards, an upper and a lower, each with a strong gate, defended by a round bastion on each side, with a ditch, and formerly with drawbridges.

Two Acts of Parliament were procured in 1788 and 1807, for the purpose of erecting the modern castle, containing the county courts and gaol. The upper ward of the castle was but little altered, but the lower ward was demolished, and a series of five buildings erected in its stead, the architect of which was the late Mr. Harrison, a native of Chester, and an honour to his profession. The erection of this, the finest structure in Chester, was spread over a period of twenty-eight years.

The grand entrance is in the Doric style, and consists of three pavilions or temples conjoined together, the central one being an entrance for carriages. The length is upwards of 100 feet. The two pavilions placed at the side form open porticos to the interior of the court, each supported by four fluted pillars without pedestals. The ceilings are of stone, divided by stone

beams into square compartments. All the pillars here as in other parts, are single blocks, and the stone was exclusively brought from the Manley quarry, about eight miles distant.

A semicircular wall of hewn stone, within a deep fossé, is continued from this entrance to the armoury, which completes the west side of the inner court, and to a corresponding building on the opposite side, a part of which is used as barracks, the rest being intended for the purposes of a court of justice during the winter and spring sessions of the county magistrates, and for the court of exchequer of the palatinate. The fronts of these buildings are ornamented with columns of the Ionic order, supporting an elegant entablature.

The remaining side of the court (the southern one) is occupied by the front of an extensive pile, containing several of the offices of the palatinate, the county-gaol, and the Shire Hall, in the front of which is a magnificent portico, supported by twelve massy pillars, placed in rows, each pillar being a single stone, twenty-two feet in height, and upwards of three in diameter. This portico, which is the most striking feature of the whole, was an addition to the original design.

From this portico is the entrance into the Shire Hall, on the north side of which is a recess for the seat of the judges; the rest of the hall, in front of this recess, forming an exact semicircle of eighty feet diameter, round the edge of which is a colonnade of twelve Ionic pillars. From the base of these pillars the floor descends to the court in the centre, in a series of circular steps, for the accommodation of the spectators; and the pillars themselves support a semi-dome, forty-four feet high, terminating over the judges' bench, and divided into square compartments, each of which contains a large rose, the centre of which is pierced through to the roof for the purposes of ventilation.

Behind the Shire Hall is the gaoler's house, under which is the chapel. On the right of this is a quadrangle, containing the hospital on the west side, the county-offices on the north, and the apartments for female debtors on the east side. On the other side of the projection of the gaoler's house is a corresponding quadrangle, two sides of which are appropriated to the male debtors. The south side of these quadrangles is left open, and in front of them, and of the gaoler's house, is a terrace, overlooking the felon's yard, which lies twenty-six feet below, divided into five yards, which converge towards the foot of the gaoler's house. Behind this is the great boundary wall of the castle, which abuts upon the city walls. The military government of the castle is vested in a governor and lieutenant-governor; the gaoler, who has the custody of both debtors and felons, is called constable of the castle, and holds his place by patent.

"Within the walls of this fortress was an instance of a felon suffering "prison forte et dure," for standing mute on his trial, till he died of hunger. One Adam, son of John, of the Woodhouses, was, in 1310, the 4th of Edward II., committed for burning his own houses, and carrying away the goods. He stood mute; a jury as usual was impannelled, who decided that he could speak if he pleased. On this he was committed "ad dietam;" and afterwards John le Morgan, constable of the castle, testified that the aforesaid Adam was dead "ad dietam." This was the origin of the punishment of pressing to death, or the "peine forte et dure," which seems a sort of merciful hastening of death; for it must have been much more horrible, as well as tedious, in the manner prescribed by the law of the first Edward, in whose reign it originated. * * The term "ad dietam" was ironical, expressive of the sad sustenance the sufferer was allowed; viz. on the first day, three morsels of the worst bread; on the second, three draughts of water out of the next puddle; and

this was to be alternately his daily diet till he died*." By the 12 Geo. III., c. 20, persons remaining mute when arraigned, are held as guilty, and may be condemned and executed.

Chester is divided into twelve wards, viz.—Trinity, St. Michael's, St. Giles's, St. Thomas's, St. Bridget's, St. John's, St. Oswald's, St. Mary's, St. Martin's, East Gate, North Gate, and St. Olave's; and it comprehends portions of nine parishes, viz.—St. Oswald's, St. John's, St. Mary's, Trinity, St. Peter's, St. Bridget's, St. Martin's, St. Michael's, and St. Olave's. The boundary of the city is well defined by stones, which are numbered; and a list of them, containing their relative bearings and number, is kept in the office of the town-clerk. The limits of the city extend far beyond the actual town, except in two directions, viz., in that of the township of Great Boughton, and that of the townships of Hoole and Newton. These townships are without the city-boundary. Into the former of them a considerable portion of what must be considered as the actual town, or its suburbs, extends, and there are also scattered about in this direction several detached houses that are connected with the town.

The population of Chester has not increased very rapidly. In 1801 it was 15,052; in 1811, 16,140; in 1821, 19,949; and in 1831 it was 21,344. Of this latter number, 9635 were males, 11,709 females. Of families employed in trade, manufactures, &c., there were in 1831, 2665; employed in agriculture, 355; and of families not entered under any particular class there were 1608. The amount of assessed taxes for 1831 was 7732*l.*; of parochial assessment, in 1829, 4850*l.* The number of houses, in 1830, above 10*l.* and under 20*l.* rent, was 536; from 20*l.* to 40*l.*, 347; at 40*l.* and upwards, 157:—total 1040.

The port of Chester was formerly a place of considerable traffic. Lucian, a monk of St. Werburgh's in the twelfth century, and who wrote a book, 'De Laudibus Cestriæ,' says,—“The beautiful river on the south side serves as an harbour for ships from Gascoigne, Spain, Ireland, and Germany, who, by the guidance of Christ, and the industry and prudence of the merchants, supply and refresh the heart of the city with abundance of goods; so that, through the various consolations of the Divine favour, we have wine in profusion from the plentiful vintages of those countries.” Amongst the articles of export were slaves, a traffic to which the Saxons were addicted. In Hakluyt (vol. i., p. 199), is the following list of the Chester articles of commerce:—

“Hides and fish, salmon, hake, herringe,
Irish wooll, and linen cloth, faldinge,
And marterns good, be her marchandie.
Hertes hides, and other of venerie,
Skins of otter, squirrel, and Irish hose,
Of sheep, lamb, and foxe, is her chaffare,
Felles of kids, and conies great plenty.”

Chester was long one of the chief points from which the communication with Ireland, especially Dublin, was kept up. It did not, in fact, entirely lose its importance in this respect until the formation of the great Holyhead Road. The commerce of the city has been long declining, and is now almost absorbed in that of Liverpool. Primarily, this must be attributed to, perhaps, natural causes. The “ruinous state of the city and haven” in the time of Richard II., and the “lamentable decay of the port, by reason of the abundance of the sand which had been allowed to choke up the creek” in the time of Henry VI., are mentioned in charters granted by these monarchs. Various attempts were made to obviate these evils; but they were insufficient to check the decay of commerce. Other causes have also operated, such as the withdrawing of almost

* Pennant's Tour in Wales, p. 162.

the entire trade in Irish linen, for the promotion of which, about sixty years ago, the Irish merchants trading to Chester established a Cloth Hall. Chester still, however, retains a small external trade. The principal articles exported and shipped coastwise are cheese, coal, lead, and copper. Chester likewise supplies many of the shopkeepers in North Wales with London, Manchester, and Birmingham goods. The manufactures of the town are inconsiderable; these consist principally of lead and shot, and a few other articles: there are two lead-foundries. The trade in cheese—for which Cheshire has been famous from a very early period—creates considerable activity. There are now eight cheese-fairs annually. Chester is a sort of metropolis to the adjoining principality of Wales; and a considerable number of families of respectability, whose incomes are limited, and who do not add to them by any profession, reside in the city.

The Dee has been honoured with much notice by the poets, and is celebrated by Drayton, Browne, Spenser, and Milton, as the holy, the divine, and the wizard Dee. Much superstition was founded on the circumstance of its being the boundary between England and Wales. The navigation of the river was impeded by sands as early as the reign of Henry VI., and a quay was then formed in the neighbourhood of Shotwick Castle, about six miles below Chester, from which place troops were usually embarked for Ireland. In the reign of Elizabeth, a new haven or quay was built lower down, and was the origin of the town of Parkgate. The navigation of the river up to Chester was restored in 1754 by a new channel, formed by a company. The embankments of the sands were carried down to Shotwick, and upwards of 2,400 feet of land rescued from the sea. In the “Vale Royal” the course of the Dee is thus described:—

“The Dee, called in Latin Dea, in British Pifirdwy, is not only the chiefest river of this county, but also of all North Wales. I may well call it of this county, because it hath in some places Cheshire on both sides thereof. And of it was the city of Chester, in times past called Deva, and the people of the country Devani. It springeth in Merionethshire, in North Wales, two miles from the great lake called Tegill, which lake is engendered, or rather fed, by divers rills and riverets which descend from the mountains. * * It leaveth Denbighshire on the west side, and hath Flintshire on the same side, but not very far; for at Pooton (which is but a mile from thence) it hath Cheshire on both sides thereof; * * and, lastly, toucheth on the south side of the famous city of Chester, capital city of the whole shire, where, having passed the bridge, it fetcheth a round compass, making a fair plain called the Rood-Eye [Roo Dee]; and, after, toucheth on the west side of the city at the Watergate. * * Afterwards the Dee becometh very broad, so that at Shotwick Castle, over into Flintshire, it is a mile broad; at the New Key, which is six miles from Chester, it is above two miles broad. * * The whole course thereof, from the head unto the sea is about fifty-five miles. Which river of Dee aboundeth in all manner of fish, especially salmon and trout. The number of quicksands in this river, and the rage of winds, causeth changing of the channel. A south or north moon maketh a full sea at Chester.”

The bridge over the Dee which connected Chester with the principality of Wales was an inconvenient clumsy structure, and long a source of complaint. In lieu of this old bridge, a handsome bridge of one arch has been erected, from a design by the late Mr. Harrison, the architect of the modern castle of Chester. It was erected in 1830-31. The span of the bridge is 200 feet, the roadway 33, and the elevation from low-water mark 54.

In the Municipal Corporation Report there is a list of forty-one charters, patents, and grants, which have been made at different times to the city of Chester. The earliest of this list of charters are three, granted by Ranulph, Earl of Chester, without date. Some controversy has arisen whether they were granted by three several Earls Ranulph or Randle, who governed the city in succession from 1120 till 1232, with the intervention of Earl Hugh from 1152 till 1180, or were all grants of Ranulph Blundeville, the third earl of that name. What the citizens termed the "great charter" was granted by Henry VII., by which the city was made a county of itself. The date of this is the 5th of April, in the 21st year of his reign. Under this charter the title of the corporation was "per nomen majoris et civium civitatis Cestriae"—"the mayor and citizens of the city of Chester."

The office of mayor is of very high antiquity in Chester: the precise time when it was first erected has not been ascertained. The charter of Henry VII. defined the mode of election of mayor, and also of sheriff. With respect to sheriffs it provided that "the said mayor and citizens may have, make, and have power to choose from among themselves every successive year two citizens for sheriffs of the same county of the city of Chester," and "That the mayor, sheriffs, and aldermen of the said city and county, dwelling therein, being annually assembled and met together, they, or the greater part of them, then there personally being may (on the day of assembly) freely elect and appoint an able and efficient person for one sheriff of the aforesaid city; and the said other fellow-citizens then there in like manner present, or the greater part of them, another sufficient and able person for the other sheriff of the aforesaid city: which two, so elected, may be and remain sheriffs, &c., for one whole year." These were usually called the "first" or "mayor's" sheriff; and the "second" or "popular" sheriff. By the Municipal Reform Act, cities which are counties of themselves, are to have their sheriffs elected by the town councils, consequently the election of the Chester sheriffs is vested in the town-council of the city. By the same Act Chester is divided into five wards, with ten aldermen and thirty counsellors.

An ancient building called the "Pentice," and in some old charters the "Appentice," was formerly the place in which the sheriff's courts were held, and in which banquets were given to such royal and noble guests as honoured the city with their presence. It was situated at the junction of the North and East-gate Streets; it was erected in 1498, partly taken down in 1780, and the remainder in 1805, for the purpose of widening the streets*.

The sheriffs preside as judges in the "Pentice Court," and to them belongs the execution of all writs from the superior courts at Westminster, within the liberties of the city of Chester. Upon them also formerly devolved the duty of executing all criminals capitally convicted, not only within the jurisdiction of the city and county, but also within the county of Chester at large: this was done in pursuance of a writ directed to them from the court of gaol delivery, requiring them to execute the criminal on a certain day named in the writ. The officers of the corporation, as well as the inhabitants of the city, held the imposition of this duty upon their sheriffs to be a great hardship and annoyance.

In the township of Gloverstone, adjoining the castle, the bodies of convicts left for execution are delivered by the constable, or his deputy, to the city sheriffs,

* *Appentitium* is defined in the glossaries to be a smaller building annexed to a larger one—the name probably given to this building as descriptive of its position with respect to St. Peter's Church.—*Lyson's Magna Brit.*

whose office it has been from time immemorial to see the sentence of the law fulfilled within their own limits. There have been various unsatisfactory conjectures respecting the origin of this custom, which is sufficiently elucidated by some ancient records of the corporation. In an inquisition taken in the year 1321, for the purpose of ascertaining the tolls payable at each of the city gates, it is stated that the mayor and citizens, as keepers of the North-gate, had a right to certain tolls, for which privilege they were bound to watch the said gate, and the prisoners in the prison of the Earl there imprisoned,—to keep the key of the felon's gallows,—to hang up the condemned criminals,—to execute the sentence of pillory, proclaim the ban of the Earl, &c., &c. There were certain customary tenants of the city, sixteen in number, who enjoyed certain privileges and exemptions, on condition of watching the city three nights in the year, and to watch and bring up felons and thieves condemned, both for county and city, as far as the gallows.

In the first year of the present king an Act was passed, (1 Will. IV. c. 70; see an abstract of it in the 'Companion to the Almanac' for 1831) entitled, 'An Act for the more effectual Administration of Justice in England and Wales.' It was contended that several clauses in this Act, the 19th in particular, discharged the city sheriffs from their painful duty; and an occasion soon arose, in which the question was tried. In the year 1834 two men were left for execution at Chester, for a crime most abhorrent to all manly and moral feeling—namely, that of assassination for hire. The sheriffs both of the county and of the city refused to perform the duty, and the criminals were left in gaol; the day of execution passed over, the murderers were respited from time to time, and the law appeared likely to be defeated. In this emergency the Court of King's Bench exerted its powers. Writs of *certiorari* and *habeas corpus* were granted, the one being to remove the conviction, and the other the bodies of the criminals from the inferior to the superior court. The Attorney-General, in moving for these writs, produced various cases, in order to show that the court of King's Bench possessed this power, and had formerly exercised it. The criminals were accordingly brought up from Chester, and after undergoing the ceremony of being introduced into the Court of King's Bench, and of hearing their sentence ordered to be carried into execution, they were hanged at Horsemonger-Lane Gaol, on the 25th of November, 1834. In order to settle the disputed point, an Act of Parliament was passed in 1835, by which the sheriffs of the city of the county of Chester for the time being, are to execute the sentence of death upon all criminals appointed to die for offences committed within the county of Chester.

The ancient Common Hall of the city was in a street which still retains the name of Common-Hall Lane. In 1695, a new town-hall, or exchange, was begun in the North-gate Street, which was completed in 1698, in which year the elections of the mayor and city officers, and the courts formerly held in the old Common Hall, were removed to this building. The Exchange is built of brick, enriched with stone ornaments, among which may be enumerated a fine statue of Queen Anne in her coronation robes, and two tablets, one of which contains the royal arms, and the other a variety of armorial bearings, allusive to the several titles of the earls of Chester. The original fabric rested in a great measure on arches and pillars of stone; but shops have been introduced in several instances under the piazza below, for the purpose of giving additional strength to the building.

The City Gaol and House of Correction are situated immediately adjacent to the city walls, between the Water Gate and the Water Tower, and are comprised

in one uniform plan, being built of brick, with entrances of stone on the eastern and western sides. In the centre of the building is a chapel. The place of execution for the county and city criminals is over the eastern entrance.

The Infirmary of Chester is a handsome brick-building, contiguous to the walls, on the west side of the city, near the Water Tower, in a situation peculiarly healthy, being removed from the noise of the streets, and open to the fine air from the estuary of the Dee and the Welsh mountains. It was founded in the year 1756, and originated from a bequest of 300*l.*, aided by subscriptions. It was opened in March, 1761. This hospital was the first into which distinct wards for fever patients were introduced, having been adopted under the direction of Dr. Haygarth, in 1783.

In addition to the corporation of the city at large, there were twenty-four companies called the Trades, which all claimed to be, and were, esteemed corporations by prescription, and enjoyed many peculiar privileges. The reader is aware that inhabitants of incorporated boroughs may now exercise any trade or calling without requiring to be free of any guild or incorporated company. The citizens of Chester were not less famous for their dramatic performances than those of Coventry. They exhibited two species, one formed upon moral romance, the other on scriptural history.

The Chester plays have been the subject of a good deal of speculation. They are stated to have been written by one Randle, a monk of Chester Abbey, and to have been first performed between 1268 and 1273. Roscoe, in his 'Lorenzo de Medici,' questions this, and states his opinion that the Chester plays are antedated by nearly two centuries. But the majority of authorities assign them to the thirteenth century. They were rude compilations, containing, amid many passages of a curious or ludicrous nature, much that is offensive to modern taste and propriety.

Chester is well supplied with the means of education. There are, according to the Education Returns of 1835, upwards of 82 schools in the place, under the heads of Daily, Boarding, Sunday, and Infant Schools. Of charity schools, the oldest is the King's School, attached to the Cathedral. There are twenty-four scholars on the foundation, who are nominated by the dean and chapter. It was founded by Henry VIII., in the thirty-sixth year of his reign. The Blue Coat School was founded in 1700, at the instance of Bishop Stratford. There is also a school in which from 400 to 450 boys and girls receive daily instruction at the expense of the Marquis of Westminster.

The Roo Dee, on which the city races are annually run, is a large level plain, on the bank of the Dee, immediately under the walls, stretching to their north-west angle from the Watergate. The whole ground was formerly covered by the water, as appears from an award in 1401, that it could not be tithed by the rector of Trinity, in consequence of its being land recovered from the sea. A stand has been erected on the race-course, by subscription from the neighbouring gentry. The building and improvements on the ground cost about 4000*l.*

1558. In this year occurred the well-known interruption of the commission of Dr. Henry Cole, dean of St. Paul's, by Mrs. Elizabeth Mottershed, an inn-keeper in Foregate Street, who was alarmed for the safety of her brother, in Dublin, and had the address to substitute a pack of cards for the dean's commission. The story is mentioned by Archbishop Usher and Sir James Ware.

Under the year 1636, the following extracts are given by Ormerod, in his 'History of Cheshire,' as proofs of the excessive filth which was suffered to accu-

multate in the close streets of Chester, and the unwillingness of the people to exert themselves to prevent the recurrence of that dreadful scourge—the plague, which had been just depopulating the adjacent country, and had been so severely felt by themselves at the commencement of the century:—

"That the lord-bishop be informed of the unwholesomeness of the puddle near the East Gate, and the inhabitants be ordered to cleanse the streets before their respective doors, *within one month*, under a fine of 10*s.*" The length of time allowed under the circumstances is most singular.

"1636. This man (William Edwards, mayor) was a stout man, and had not the love of the Commons. He was cruel, and, not pitying the poor, he caused many dunghills to be carried away; but the cost and time was on the poor; it being so hard times, might well have been spared."

"The mayor caused the dirt of many foul lanes in Chester to be carried to make a bank to enlarge the roodey, and let shippes in. It cost about 100*l.*"

In this year the celebrated William Prynne being conveyed through Chester to be imprisoned in Caernarvon Castle, he was met on his approach by numbers of the citizens, who paid so much respect to the sufferer for liberty of conscience, as to give offence to the government. Many of them were therefore fined, —some 500*l.*, 300*l.*, and 250*l.* Mr. Peter Ince, a stationer, and one of the offenders, made a public recantation before the bishop, in the cathedral. In the following year, four portraits of Prynne, painted in Chester, were burned at the High Cross, in the presence of the magistracy.

1683. In the middle of August, James Duke of Monmouth, came to Chester, greatly affecting popularity, and giving countenance to riotous assemblies and tumultuous mobs, whose violence was such as to pelt with stones the windows of several gentlemen's houses in the city, and otherwise to damage the same. They likewise furiously forced the doors of the cathedral church, and destroyed most of the painted glass; beat to pieces the baptismal font, attempted to demolish the organ, and committed other outrages. Monmouth was taken into custody on his return from Chester, at Strafford. While at Chester he tried various arts to gain popularity, and obtain support for his ill-timed and injudicious insurrection. The infant of the mayor was christened during his stay, and the duke stood godfather.

1745. The last event of sufficient importance to be noticed, occurred this year, on the news of the approach of the army of the Pretender. The city was put in a posture of defence; orders were given that all householders should lay in a stock of provisions for a fortnight; all trade and business ceased entirely; and the principal inhabitants removed their valuables. The city, however, was not disturbed.

The chief sources from whence the foregoing account of Chester have been derived, are, 'Lyson's Magna Britannia;' 'Cheshire,' in 3 folio vols., by George Ormerod, LL.D., F.R.S., &c.; Pennant's 'Tour in Wales,' and the 'Boundary and Municipal Corporation Reports.'

*• The Office of the Society for the Diffusion of Useful Knowledge is at 59, Lincoln's Inn Fields.

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FABLE OF THE WOLF AND THE CRANE.



[Wolf and Crane.]

THE fact that fables have been a popular medium of communicating useful truths in all ages and in every part of the world proves how simple are the elements from which an observant mind may gather intelligence and obtain an intimate acquaintance with things which elevate and improve it. To him who has thoroughly investigated the qualities and character of objects with which he is daily surrounded, the following lines of Wordsworth are not inapplicable:—

“The outward shows of sky and earth,
Of hill and valley he has view'd;
And impulses of deeper birth
Have come to him in solitude.
In common things that round us lie
Some random truths he can impart,
—The harvest of a quiet eye,
That broods and sleeps on his own heart.”

The reply of the Shepherd to the Sage, which Gay has given in his Introduction to his Fables, will further illustrate our meaning, and point out the manner in which the result of observation may be applied in a practical manner as a guide in actual life.

“The Shepherd modestly replied:—
‘The little knowledge I have gain'd
Was all from simple nature drain'd;
Hence my life's maxims took their rise,
Hence grew my settled hate to vice,
The daily labours of the bee
Awake my soul to industry;
Who can observe the careful ant,
And not provide for future want?
My dog (the trustiest of his kind)
With gratitude inflames my mind:—

I mark his true, his faithful way,
And in my service copy Tray.
In constancy and nuptial love,
I learn my duty from the dove.
The hen, who from the chilly air,
With pious wing protects her care;
And every fowl that flies at large,
Instructs me in a parent's charge.
From Nature too I take my rule,
To shun contempt and ridicule.
I never, with important air,
In conversation overbear.
Can grave and formal pass for wise,
When men the solemn owl despise?
My tongue within my lips I rein;
For who talks much must talk in vain.
We from the wordy torrent fly:
Who listens to the chattering pye?
Nor would I, with felonious sleight,
By stealth invade my neighbour's right.
Thus every object of creation
Can furnish hints to contemplation;
And from the most minute and mean,
A virtuous mind can morals glean.”

Having already touched somewhat largely on the literary history of this species of composition, we shall now merely give the illustration to the cut as we find it in Dodsley's collection:—

“A wolf having with too much greediness swallowed a bone, it unfortunately stuck in his throat; and in the violence of his pain he applied to several animals, earnestly entreating them to extract it. None cared to hazard the dangerous experiment, except the crane; who, persuaded by his solemn promises of a gratuity,

ventured to thrust her enormous length of neck down his throat, and having successfully performed the operation, claimed the recompence. 'See the unreasonableness of some creatures,' said the wolf; 'have I not suffered thee safely to draw thy neck out of my jaws, and hast thou the conscience to demand a further reward?'"

The moral, as given in Dodsley, is that the utmost extent of some men's gratitude barely consists in refraining from oppressing and injuring their benefactors.

POLITICAL ECONOMY OF OUR ANCESTORS.

We are not among the deriders of what is properly called the wisdom of our ancestors, though we think that phrase is often used without any understanding of its true meaning. If any person holds that the men who lived two, or three, or four centuries ago were wiser than we their descendants of the present day, with that person we cannot agree; and we would remind him that if it be "old experience" which gives wisdom, that belongs, as Bacon has observed, more to the age that now is than to any that hath preceded it. What is commonly called antiquity was comparatively the youth or nonage of the world, and we are really the true ancients.

But we look with much respect upon the wisdom of our ancestors, rightfully so called. We respect that which has stood the test of time, and been sanctioned by the approval of many past generations. We do this not from any superstition in favour of the past, but on the rational principle that, in matters disputable or doubtful, experience is entitled to go for something, and therefore that which has been long established and found to answer its purpose has in so far an advantage over that which is altogether new and untried. The wisdom of our ancestors in this sense is merely another name for the certainty of experience as opposed to theoretical or conjectural expectation. In the case of any contemplated change, therefore, and especially of any great social or institutional change, the consequences of which may be so fearfully momentous, it is an element which no prudent or considering mind will omit to take into calculation. Like any other element in moral questions, where precise admeasurement is impossible, it may sometimes be rated too high,—but it may also be rated too low. All we say is, that it is always to be allowed some weight. In other words, the wisdom of our ancestors,—that is, the experience of the generations which have preceded us,—is never to be altogether set aside in weighing such adverse reasoning, however plausible, as is supported by no experience.

Speaking however of the wisdom and knowledge possessed by our ancestors some ages back, as compared or contrasted with our own, one observation which we may make is, that one of the very greatest advantages we enjoy is in the vastly more general diffusion of intelligence and of sound opinions which characterises the present times. In this respect, most remarkably, modern civilization appears to be distinguished from that of the ancient world—or rather, we should say, the civilization which has arisen since the invention of printing from that which existed previously. But even this mighty instrument was not able to work its whole effects at once. So far from it, its powers are but unfolding themselves even now. When the very first printed book appeared, it may well be said, knowledge was made the rightful property of the many. The light which had been heretofore immured in libraries, or carried about in lanterns, was now "set in the firmament of heaven to give light upon the earth." But many obstacles were to be removed before it could diffuse itself over the whole wide region that had so long lain in darkness. Cheap printing, by means of

machinery, and the new power of steam, and unprecedentedly-large impressions, is in our own day working a second revolution, perhaps as great as that which was effected by the first employment of the printing-press. Stereotyping, lithography, and other ingenious and valuable inventions, are contributing their aid to the same end. And co-operating also with these improvements of the instrument, there has been constantly going on a general improvement of society,—of its institutions,—of its resources,—of its powers, and the various modes of employing them,—in short, of its whole organization, action, and tendencies,—which has, as it were, actually elevated the mass of the people in Europe, within the last three centuries, to altogether a new condition of being.

Still, as we have observed, the grand difference between the wisdom of the present day and that of past times is not so much in the amount of the one as compared with that of the other, as in the much greater extent to which knowledge and correct views are now diffused. Of course, of that kind of knowledge which depends upon experimental investigation, and also in mathematical knowledge, where every step that is taken on the straight ladder of demonstration is necessarily a step in advance, the positive increase has been very great. But in the field of moral speculation there is reason to believe that most of our soundest conclusions have been anticipated by the superior minds of past generations, although they may never perhaps, till a comparatively recent date, have come to be commonly understood and received, and to form part of the general intellect. The candle has been lighted, though it has been placed under a bushel.

If there be any moral science which may be thought pre-eminently to deserve the name of a modern science it is that of Political Economy. Undoubtedly, in so far as it has been reduced to the form of a science, it is of very modern date. But we shall be in error, nevertheless, if we suppose that the subject of "the Nature and Causes of the Wealth of Nations" did not engage the attention of anxious speculators ages before it began to be systematically treated of by those writers whom we regard as the fathers of the science, either in our own country or elsewhere. The doctrines, in several respects in advance of their age, maintained towards the close of the seventeenth century by the Hon. Dudley North, Sir Josiah Child, and others of our countrymen, have been frequently pointed out; but long before their day questions in political economy had been discussed with great ability and ingenuity in England.

We have lately met with a very curious discourse upon this class of subjects, published about the middle of the reign of Elizabeth. It is curious and interesting both as an example of the political economy of that era, and from the notices to be found in it respecting the domestic manners and other minute peculiarities of the time, which have been neglected by our more formal histories, although such things really make the best indications of the state of society, and bring before us at once the liveliest and the truest picture of the country.

The pamphlet, which is in black letter, is of a small quarto form, and consists of fifty-five leaves; the pages, as was then the practice, being numbered only on one side of each leaf. It is entitled 'A Compendious or Brief Examination of certain ordinary Complaints of divers of our Countrymen in these our days, &c., by W. S. Gentleman: Imprinted at London, in Fleet Street, near unto St. Dunstan's Church, by Thomas Marshe, 1581. Cum Privilegio.' The running title, however, or that which appears along the tops of the pages, is 'A brief Conceit, touching the Commonwealth of this Realm of England.' The work is dedicated to the Queen, Elizabeth.

The form which the author has adopted in the discussion of his subject is that of dialogue. He himself assumes the character of a Knight, or country gentleman; but we shall let him introduce the several personages of the drama in his own way.

"After I and my fellows," he begins, "the justices of peace of this commonalty, had the other day declared the Queen's Highness' Commission, touching divers matters, and given the charge to the inquest, I being both weary of the heat of the people and noise of the same, thought to steal to a friend's house of mine in the town, which selleth wine, in the intent to eat a morsel of meat, for I was then fasting, taking with me an honest husbandman, whom for his honesty and good discretion I loved very well; whither as we were come, and had but scarce sat down in a close parlour, there cometh me in a merchantman of that city, a man of estimation and substance, and requireth the said husbandman to go and dine with him. 'Nay,' quoth I, 'he will not, I trust, now forsake my company, though he should fare better with you.' 'Then,' quoth the merchantman, 'I will send home for a pasty of venison that I have there, and for a friend of mine, and a neighbour that I had bid to dinner, and we shall be so bold as to make merry withal in your company, and as for my guest he is no stranger unto you neither. And therefore both he of yours, and you of his company, I trust, will be the gladder.'

Knight.—'Who is it?'

Merchant.—'Doctor Pandotheus.'

Knight.—'Is he so? On my faith he shall be heartily welcome; for of him we shall have some good communication and wise, for he is noted a learned and a wise man.' And immediately the merchant sendeth for him, and he cometh unto us, and bringeth with him an honest man, a capper [that is, a dealer in caps, a hatter] of the same town, who came to speak with the said merchant. Then after salutations had (as ye know the manner is) between me and master Doctor, and renewing of old acquaintance, which had been long before between us, we sat all down, and when we had ate somewhat to satisfy the sharpness of our stomachs, 'On my faith,' quoth the Doctor to me, 'ye make much ado, you that be justices of the peace of every county, in sitting upon commissions almost weekly, and in causing poor men to appear before you, leaving their husbandry unlooked for at home.'

To this the Knight replies by admitting the truth of the Doctor's remark. With some *naïveté*, however, in excusing the practice, he passes over altogether the inconveniences it occasions to the poor husbandmen, and takes the whole merit of putting up with the hardship to himself and those of his own class. "Yet," he says, "the prince must be served, and the commonweal; for God and the prince have not lent us the poor livings that we have, but to do service therefore abroad among our neighbours."

The equal and familiar footing on which the several individuals introduced in this passage are represented as associating is a trait of the times when there was as yet only one intermediate class in English society between the nobleman and the labourer. The order of gentry as distinguished from that of tradesmen and yeomen was only as yet in process of formation. Twenty or thirty years later, the Knight, the Merchant, and the Doctor would scarcely have been found on such terms of easy and intimate companionship with the Husbandman and the Capper.

The conversation having thus commenced, was speedily drawn to what was then, it appears, as it still is, the standard English dinner-table topic. "Let us drink about," says Squire Western in 'Tom Jones,' "and talk a little of the state of the nation, or some such discourse that we all understand." So to the dis-

ussion of the state of the nation proceeded our five friends over their wine in the year 1551.

The Husbandman opens the debate with his budget of grievances. The bad times, in his judgment, are all owing to the inclosing of waste lands. "Marry," he says, "for these inclosures do undo us all; for they make us to pay dearer for our land that we occupy, and causeth that we can have no land in manner for our money to put to tillage: all is taken up for pasture,—for pasture either for sheep or for grazing of cattle; in-somuch that I have known of late a dozen ploughs, within less compass than six miles about me, laid down within this seven years; and where three score persons or upwards had their livings, now one man with his cattle hath all."

He adds that all things also have become so dear, that labourers are no longer able to live by their day wages. "I have well the experience thereof," exclaims the Capper, next taking up the discourse, "for I am fain to give my journeymen two-pence in a day more than I was wont to do, and yet they say they cannot sufficiently live thereon. And I know for truth that the best husband [that is, the best manager] of them can save but little at the year's end; and by reason of such dearth as ye speak of, we that are artificers are able to keep but few or no prentices like as we were wont to do." In consequence, he asserts, the cities in all parts of the kingdom are falling to decay.

This last statement is confirmed by the Merchant, as true of the kingdom generally, with the exception only of London. "And albeit," he adds, "there be many things laid down now which beforetime were occasions of much expences, as may-games, wakes, revels, wages at shooting, wrestling, running, and throwing the stone or bar, and besides that, pardons, pilgrimages, offerings, and many such other things; yet I perceive we be never the wealthier, but rather the poorer, . . . for there is such a general dearth of all things as before twenty or thirty years hath not been the like, not only of things growing within this realm, but also of all other merchandize that we buy from beyond the sea; as silks, wines, oils, woad, madder, iron, steel, wax, flax, lincloth, fustians, worsteds, coverlets, carpets, and tapestry; spices of all sort and all haberdasher ware, as paper both white and brown, glasses as well drinking as looking, and for glazing of windows; pins, needles, knives, daggers, hats, caps, broaches, buttons, and laces. I wot well all these do cost now more by the third part than they did but few years ago. Then all kind of victual are as dear or dearer again, and no cause of God's part thereof, as far as I can perceive, for I never saw more plenty of corn, grass, and cattle of all sort than we have at this present, and have had, as ye know, all these twenty years past continually, thanked be our Lord God."

The case, then, is evidently one of a general rise of prices—how occasioned will be matter for consideration in the sequel. In the mean time we would point attention to this speech of the Merchant, as highly curious for the catalogue which it gives us of the foreign imports of that day. A good many of the articles, it will be observed, for which England was then dependent upon other nations—including especially the various descriptions of hardware goods and of the textile manufactures—are those with which she may now be almost said to supply the world. In those days she was obliged to foreigners not only for the manufactured articles, but even for the raw material.

To the Merchant's remarks the Knight now replies;—"Since ye have plenty of all things, of corn and cattle (as ye say), then it should not seem this dearth should belong of these enclosures, for it is not for scarceness of corn that ye have this dearth; for, thanked be God, corn is good cheap, and so hath been these many years past continually. Then it cannot be the

occasion of the dearth of cattle, for enclosure is the thing that nourisheth most of any other."

"Yet," he adds, "I confess there is a wonderful dearth of all things." The word *dearth*, it is to be remembered, means here simply *dearness*; the modern idea of *scarcity* is expressly excluded in the present case. The Knight contends that the hardship of his own case, in consequence of the general rise of prices, is in some respects greater than that sustained by any of his friends. The landed proprietor, he observes, whose estate is all let on lease, is, while all other dealers are raising the prices of their commodities, nearly altogether precluded from protecting his particular interests by the same expedient. It is true, he admits, that as a lease occasionally falls in he may obtain some small addition to his rents, but what he gets in this way is nothing like a compensation for the greatly increased expense of living. "As we cannot raise our wares," he says, "as you may yours, and as methinketh it were reason we did, and by reason that we cannot, so many of us, as ye know, that have departed out of the country of late have been driven to give over our households, and to keep either a chamber in London, or to wait on the court uncalled, with a man and a lackey after him, where he was wont to keep half a score of clean men in his house, and twenty or twenty-four other persons besides, every day in the week. And such of us as do abide in the country, still cannot, with two hundred a-year, keep that house that we might have done with two hundred marks but sixteen years past*."

The Knight adds, that to obtain some increase to his income, he is obliged to keep part of his estate in his own hands and to rear sheep on it. "Yea," interrupts the Husbandman, "those sheep is the cause of all these mischiefs, for they have driven husbandry out of the country, by the which was increased before all kind of victuals, and now altogether sheep, sheep, sheep. It was far better when there were not only sheep enough, but also oxen, kine, swine, pig, goose, and capon, eggs, butter, and cheese; yea, and bread-corn, and malt-corn enough besides, reared altogether upon the same land."

The Doctor, who had hitherto remained silent, now strikes in:—"I presume," he observes, "by you all, that there is none of you but have just cause to complain." "No, by my troth," replies the Capper, "except it be you men of the Church, which travail nothing for your living, and yet have enough." "Ye say troth, indeed," mildly rejoins the Doctor, "we have least cause to complain; yet ye know well we be not so plenteous as we have been." He then mentions, as diminutions of their incomes, that the clergy have sustained the deduction of first-fruits and tenths; but he admits that they might still live comfortably enough, notwithstanding the rise of prices, too, which affects them like all others, if they might have more peace and less anxiety. "Albeit," he proceeds, "we labour not much with our bodies (as ye say), yet ye know we labour with our minds, more to the weaking of the same [bodies] than by any other bodily exercise we should do, as ye may well perceive by our complexions: how wan our colour is, how faint and sickly be our bodies, and all for lacke of bodily exercise." "Marry," exclaims the Capper on this, "I would, if I were of the Queen's Council, provide for you well a fine, so as you should need take no disease for lack of exercise; I would set you to the plough and cart, for not a whit of good do ye with your studies but set men together by the ears—some with this opinion and some with that—some holding this way and some another—and that so stiffly, as though the truth must be as they say that have the upper hand in contention; and this contention is not alone the least cause of former up-

* A mark was two-thirds of a pound, or 13s. 4d.

roars of the people, some holding of the one learning, and some of the other." "In my mind," concludes this genuine Jack Cade, "it made no matter though we had no learned men at all."

We must pass over the long debate to which the expression of these extreme opinions gives rise, as not belonging to our present purpose. The Doctor argues for the advantages of learning to the commonwealth, with great patience as well as considerable eloquence, with his thorough-going opponent, who admits, however, that he would have people taught reading and writing; and would also preserve in the country a knowledge of some of the languages spoken by neighbouring nations, that we might not be cut off from all intercourse with the rest of the world.

At last the Knight cuts short the further discussion of this matter by the following proposition: "Forasmuch as we have thus far proceeded as to the finding out of the griefs, which, as far as I perceive, standeth in these points, that is to say, dearth of all things in comparison of the former age, though there be scarceness of nothing, desolation of countries by inclosures, desolation of towns for lack of occupations and crafts, and division of opinions in matters of religion, which haleth men to and fro, and maketh them to contend one against another; now let us go to the garden, under the vine, where, having a good, fresh, and cool sitting for us under the shadow there, we may proceed further on this matter at leisure. And I will bespeak our supper here with mine host, that we may all sup together. A God's name, quoth every one of the rest of the company, for we are weary here of sitting so long. And so we all departed to the garden."

And thus concludes Dialogue the First, or the statement of the evils complained of by the different classes of the community.

HOWDEN CHURCH.

THE wapentake of Howdenshire, in the East Riding of Yorkshire, is bounded on the south by the river Ouse; but as the Trent joins that river nearly opposite the eastern limits of Howdenshire, the Humber forms its south-eastern boundary line. A very small part of Howdenshire is west of the river Derwent, and there are two small portions which are altogether detached, and are situated east of the wapentake, on the banks of the Humber. The population of the whole wapentake was 8,216 at the last census. The country is flat, and was formerly subject to frequent inundations. Nothing can be less picturesque than the appearance which it presents; and yet, though there is little to strike the eye, the district is far from being destitute of interest if its former condition and history be investigated.

Howden, the principal town of the wapentake, is situated about a mile from the Ouse. The parish contains twelve townships and two chapelries, and rather more than 4,500 inhabitants. A reference to its past state will explain some of the circumstances connected with its present condition. The manor and church of Howden, or Hoveden, as it was anciently called, originally belonged to the abbey of Peterborough; but previous to the Conquest, they had been wrested from that monastery, on account of its inability to pay the tax called *dane-gelt*, which was levied with such rigour, that those who failed in raising the required contribution forfeited their lands. This church and manor were in possession of the crown at the period of the Conquest, and were given by the Norman monarch to the Bishop of Durham, who obtained a confirmation of the grant from Pope Gregory VII. The bishop vested the church in the monks of Durham, but retained the manor. Thus the prior and convent of Durham obtained ecclesiastical jurisdiction in Howdenshire; and the bishop, being



[Howden Church.]

lord of the manor, was invested with extensive secular authority within the same district. The clergy were at that period the most enlightened men of the age, and from the position which they occupied, a large share of wealth and influence fell naturally into their hands. The intelligence of which they were the chief and nearly exclusive possessors has long ceased to be the inheritance of a particular class, and none are now excluded from the advantages which it confers. But though this change has been going on for a long period, it has only more recently begun to work out its natural results. By virtue of the manorial rights with which the Bishops of Durham were invested eight centuries ago, they still held their copyhold courts, their freehold courts, and courts baron in Howden. The separation of the secular from the ecclesiastical functions of the Bishops of Durham is now on the point of being effected, and Howdenshire will of course be affected by the change.

In the thirteenth century, a Bull was issued, appropriating the church of Howden to sixteen monks; but the prior of Durham successfully exerted himself with the Pope, and the church was rendered collegiate, with

five prebendaries. Accordingly, in 1267, the Archbishop of York, after setting forth that the parish church of Howden was very wide and large, and the rents and profits so much abounding as to be sufficient for many spiritual men, ordained that there should be endowed "for ever" five prebends out of its revenues, and that each of them should maintain at his own proper cost a priest and clerk in holy orders, to administer in the said church in a canonical habit, according to the custom of the church in York, except in matins, which they should say in the morning for the parish. There were five chantries, dedicated respectively to St. Thomas the Martyr, St. Mary, St. Catherine, St. Cuthbert, and St. Andrew. At the Reformation the net revenue of the prebends was 63*l.* 18*s.* 4*d.*

The collegiate church of Howden was dissolved in the first year of Edward VI., and the temporalities thereby became invested in the crown. Thus they remained till 1582, when Queen Elizabeth granted them by letters patent to Edward Frost and John Walker, their heirs and assigns for ever. The tithes are now in the hands of several impropiators. The living is a

vicarage in the gift of the crown, and is only worth 163*l.* per year, out of which the salary of a curate is paid. The revenues of the church in the thirteenth century were sufficient for the maintenance of "many spiritual men;" and if, at the dissolution of the church as a collegiate institution, these revenues had been reserved for public purposes, some provision might now have been made for religious instruction in the new port of Goole, only three miles from Howden, which, though containing only a few years ago some half-dozen houses, promises to become the resort of industry and a place of extensive commerce. There are at this moment two collegiate churches (at Heytesbury and Middleham), whose utility is, perhaps, not less than that of Howden at the period of its dissolution; but instead of distributing their revenues to individuals, by which no security would be obtained for their beneficial employment, it is proposed by the Commissioners who have recently investigated such establishments, to render them subservient to public use, by bestowing their endowments in quarters in which they are really needed.

When the church of Howden had got into private hands, the work of decay soon became visible. In 1591 the churchwardens directed a survey to be made, for the purpose of ascertaining "what decay the choir of Howden church is in, whether it be in timber, in stone, in lead, or glass. No effectual repairs appear to have resulted from the investigation; for the choir becoming altogether unsafe, the parishioners, in 1634 and 1636, fitted up the nave for the celebration of public worship. In 1696 the groined roof fell in, and from that time the east end has been but a venerable memorial of its former magnificence. The church is built in the form of a cross, with a square tower, 135 feet in height. The chapter-house was formerly the most celebrated portion of the edifice. It was built in the thirteenth century, and contained thirty stalls, each under a gothic arch, separated by clustered pilasters, very small, and of delicate form, having foliated capitals of pierced work, from which rich tabernacle work rose, and formed a canopy for each stall. The tower of the chapter-house fell in 1750. The whole length of the church, including the ruins, is 255 feet, and the breadth 66 feet. The length of the choir is 120 feet, and of the nave 105 feet, and the breadth of each is 66 feet.

Nearly close to the church the bishops of Durham had an ancient palace, which was their frequent summer residence. A park extended from it to the Ouse, distant about a mile. The ruins of this ancient edifice have been occupied as a farm-house.

At Knedlington, one mile from Howden, Terrick, a bishop of London, was born. Roger de Hoveden, a monkish historian of the reign of Henry II., is supposed to have been born at Howden.

Wressle Castle, an ancient seat of the Percys, Earls of Northumberland, though not in Howdenshire, is not more than four miles from Howden. It was dismantled at the close of the civil wars, and was afterwards occupied as a farm-house, but in 1796 it was burnt down. The establishment which the Percys kept up at Wressle was scarcely inferior to that maintained at Alnwick. The number of priests retained was eleven, at the head of whom was a Doctor or Bachelor in Divinity, and there was a complete set of singers and choristers for the service of the chapel. The river Derwent runs close to the site of the ancient castle, but nothing can be less inviting than the neighbouring country. Other circumstances than the charms of beautiful scenery determined at that period the spot in which the baronial structure was destined to arise. When the power of the barons had been circumscribed by the growing extension of the sovereign authority, that authority was still occasionally bearded; and until the sympathy between the crown and the nobility was a little strengthened, the remote and in some degree

inaccessible parts of the country would be the natural home of the subdued but still proud and haughty noble.

Whatever may have been the case formerly, Howden now possesses extensive means of intercourse with other places, though we question if such a vehicle as a stage-coach has been seen in the town for the last ten or twelve years. The horse fair which is held here is one of the most celebrated in the kingdom, and is numerously attended. The steam-boats which pass and repass Howden many times a day, between Hull and Selby, offer more convenient means of communication with Howden than any other mode of transport. Selby, which is only ten miles distant, places Leeds and the busy district around it in close contact with Howden. The steam-boats to Thorne render the communication with Sheffield nearly as rapid; and from Goole, which is so short a distance from Howden, there are steam-boats to Hamburg, London, and Yarmouth. The communication with the part of the west-riding of Yorkshire nearest Howden is effected by a ferry-boat. It will afford an idea of the extent of accommodation which the Post-office has provided, and of the rapid manner in which it accomplishes its useful ends, if we add that though Howden is distant 180 miles from London, and no direct mails pass nearer than twenty miles, yet that letters from the metropolis reach it in about twenty hours.

CLERMONT AND THE AUVERGNE MOUNTAINS.

AUVERGNE is placed nearly in the centre of France, and though no other province in that kingdom can vie with it in natural curiosities and in magnificent scenery, it is perhaps the least known of all. Auvergne is divided into several departments, the principal one of which is the Puy de Dôme, so called from a lofty mountain in it, the top of which bears an exact resemblance to a dome, and towers above a long-extending chain of other mountains. Nothing can exceed the picturesque appearance of Clermont, the principal town of the department: on entering it, however, it is found to be an old and irregularly-built town, with narrow and dirty streets; but the names of some of them will startle the educated stranger, for example, among others he will meet with the Rue Pascal, the Rue Massillon, and the Rue Jacques Delille: upon inquiry, he ascertains that the illustrious mathematician and moral and natural philosopher, Pascal, was born in Clermont,—that Massillon, the eloquent preacher, was for a long time bishop of that city,—and that Delille, the most natural and most harmonious, perhaps, of French poets, was born near it.

The cathedral of Clermont is the first attraction for the stranger: it is an imposing pile, built on the most elevated part of the city: it had formerly four towers, but two were destroyed in the first Revolution. The bishop's palace is near the cathedral. There is also a public library, to which is attached a botanical garden, filled with all the plants peculiar to the department in the reading-room, a portrait of Massillon, in his episcopal robes, and a statue of Pascal, presented by Charles X. The library also contains a cabinet of choice and rare minerals, some of which are entirely peculiar to the department.

In one of the "faubourgs" of Clermont is the fountain of St. Alyre, which petrifies whatever its water falls on, or rather covers it with a hard and gravelly incrustation. Grapes, chestnuts, cabbages, birds and birdcages, and even dogs and cows, have been thus encrusted over. A large cow and calf thus preserved may be seen in the garden attached to the fountain. A number of curious objects can be purchased for a few francs. But by far the most remarkable object

there is the bridge that has been formed by the waters of the fountain; it took 150 years to complete it. There is another bridge in the course of formation; half of it is already finished: when complete, it will be about five feet long and two broad;—the process of its formation can be seen by the visiter. There are baths fitted up near this fountain, which supplies them with water.

As a spectator gazes around from some elevated spot in Clermont, the panorama which he views is truly magnificent: on one side he beholds the Puy de Dôme chain of mountains, the extent of which cannot be measured by the eye. The Puy de Dôme itself is verdant in summer, but the others for the most part are rocky and bare, with intervening chasms, frightful precipices, and deep tortuous ravines: their ascent is difficult and fatiguing, and, in many parts, impracticable. In summer the mountain-torrents are dried up, but the marks of their impetuosity are still visible. Many of these mountains are covered with discoloured lava. These mountains were formerly volcanic, and many evident traces of the ravages committed are visible to this day.

There are many little villages among these mountains. They are built of, and on, the lava that, some hundreds of years ago, had flowed from these mountains. The dress of the inhabitants is extremely picturesque, and their wild expressive looks, their large flashing eyes, and long flowing hair, seem all to be in unison with their mountain-homes.

Like most mountaineers, they are hospitable to strangers, but they have likewise the reputation of being dexterous thieves; and as there seems to be a great dislike among these men to the inhabitants of Clermont, it would be well for those addicted to mineralogy, or similar pursuits, to take with them some weapons of defence.

The women of these mountains are extremely plain, and numbers of them are frightfully deformed by large swellings (called *goîtres*) in their throats, which sometimes reach the size of an infant's head, and which, if not cured in time, generally bring the unhappy possessor to an early grave, or to a state of complete idiotism. There is scarcely a woman to be met with on these mountains who is not more or less disfigured in this manner. These swellings seem to be occasioned by the intense coldness and mineral qualities of the water. The nature of these complaints however seems to be little understood.

There is a disagreeable *patois*, or corrupt French, spoken in these mountain-villages, which is almost unintelligible to those even who are perfectly conversant with the French language. In some parts of the south of France the "patois" is extremely pleasing and even highly poetical; but the Auvergné patois is anything but harmonious. There are however different dialects of it; and that which is spoken at Mont d'Or, a village celebrated for its baths, is perhaps more pleasing and intelligible than the others. The patois is everywhere spoken with such an astonishing volubility, that it is difficult even to catch the words.

On Sundays, in summer, the Puy de Dôme is the rendezvous of many gay parties from Clermont and the neighbouring towns. The ascent is performed in about an hour and a half: there was formerly a little hut built on the top of it, for the accommodation of visitors, but it was mischievously burnt down by some of the townspeople. As this happened in the dusk of the evening, and as this mountain was known to have been formerly volcanic, the sight of the flames occasioned no small terror in the surrounding villages. It was on this mountain that Pascal made his observations on the weight of the air.

The ascent to the Puy de Dôme, however, well repays the exertion; once on the top of it, you gaze with utter astonishment on the scenes around: on all

sides you look down on extinct volcanoes, dark craters, and on high rocky mountains, that, from the place where you stand, appear but as so many mounds. A countless number of villages are glistening in the sun before you; to your right extends a magnificent chain of mountains; and at the farthest visible point of them you may see, if the day be clear, the still loftier peak of Mount Sancy, in the Mont d'Or chain. The eye seems lost amid such a variety of objects, and the visiter descends, convinced of the inadequacy of language to describe so diversified a scene.

On the top of the Puy de Dôme you have all at one grasp, as it were; your eye embraces the whole view,—mountains, hills, villages, vineyards, and the beautiful plain of the 'Limagne;' but in wandering among the less elevated mountains, in their ravines, their broken and abrupt gorges, among their winding paths, you have all these objects doled out to you, as it were, in different portions and under various appearances. At one time you find yourself completely blocked up by gloomy mountains, of which you can see no end, and from which you know not exactly how to emerge: a few turns more will perhaps bring you before a narrow and deep ravine: you look along it, and you may possibly discover, in the distance, the shining steeple of some village-church, surrounded by vineyards or humble cabins; advancing a few steps more, you see on the left an extensive and varied landscape, while on the right all view is prevented by rugged and obtruding mountains; you go back, and presently all is changed: it is now on your left that the mountains extend, while on your right a more extensive view than even the last one is opened for you; you gaze on shining villages, teeming vineyards, and possibly on the whole city of Clermont. There is, indeed, no end to the varied views that may be had from these mountains; and each of those views forms in itself a perfect picture: at one time, it is a little vineyard with a peasant tending it, and his dog sleeping near his basket of provisions on his coat; at another, it is a number of peasant girls returning from Clermont to their mountain-homes, alternately seen and lost, as they walk up the winding paths; now it is a merry knot of peasants, male and female, returning from vintage with cows yoked to a patriarchal sort of cart, filled with the trodden-down grapes; you see them one moment talking all merrily together, and the next bowing or kneeling before a wooden cross or image of the Virgin with her infant in her arms; you look beneath you, and you find yourself near one of these mountain villages, built of and on the once melting lava; you look above you, and you see a silent group of peasants in all their picturesque appearance gazing down at you, and saluting you the moment you perceive them; now it is the city of Clermont, with the country on one side of it, now part of Clermont with the country beyond it; now it is a little chapel built near some cross roads, with perhaps some old venerable peasant praying before it: each turn, each step, almost, presents some striking view; you seem to be looking through a kaleidoscope, and from familiarizing yourself, as it were, with the continued variety, the whole assumes at last something of the ridiculous. Altogether, there is perhaps no part of France more interesting on many accounts than Auvergne, and particularly the department of Puy de Dôme.

THE RIVER NILE.

(From the Notes to 'The Pictorial Bible'.)

"Stand by the river's brink*."—This is the Nile. This indefinite indication, "the river," always sufficiently denotes the Nile in speaking of Egypt, because in fact that country does not possess any other river.

* Exodus, chap. vii. ver. 15.

In a distance of 1350 nautical miles, from the mouth of the Tacazze to the Delta, the Nile does not receive a single tributary stream from either the east or west, which, as remarked by Humboldt, is a solitary instance in the hydrographic history of the globe. It is to this noble river that Egypt owes its fertility, and even its existence. The soil of Egypt was no doubt originally formed by the earth brought down by the river from Abyssinia and the interior of Africa, and deposited during the annual inundation; and that it has been progressively elevated in the course of ages from the same cause, is demonstrated by a considerable number of distinct facts. Thus towns and buildings which are known from history to have been originally built on mounds, to secure them from the effects of the inundation, now lie so low on the plain as to be inundated every year: and it also appears that a greater rise in the river seems now necessary to prevent a dearth than was required in the age of Herodotus. Thus, in time, the land of Egypt would become desolate, from the failure of the inundation which is essential to its fertility, were not an equilibrium preserved by a nearly corresponding elevation of the river's bed, so that the point of overflow is maintained nearly in the same ratio with the elevation of the soil. Among other facts, this is demonstrated by the ancient Nilometer near Elephantine, mentioned by Strabo, which is still in existence. The highest measure marked upon it is twenty-four cubits; but the water now rises, when at its greatest elevation, nearly eight feet above this mark; while it appears from an inscription on the wall, made in the third century A.D., that the water then rose only a foot above that level. This gives an elevation of about five inches in a century; and it has been collected, from quite independent data, that the rise in the circumjacent soil has been nearly in the same proportion. It is true that there are isolated facts which seem to militate against this general conclusion; but they may be accounted for by supposing certain irregularities, in themselves very probable, which in some places make the rise in the bed of the river exceed that in the neighbouring soil, and in others, make the elevation of the soil to exceed that of the river's bottom. Dr. Shaw, who estimates the increase in the depth of the soil at rather more than a foot in a century, observes that Egypt must have gained forty-one feet eight inches of soil in 4072 years; and as he does not sufficiently advert to the corresponding elevation of the river's bed, he sees cause to fear that, in process of time, the river will not be able to overflow its banks, and Egypt, from being the most fertile, will become, from the want of the annual inundation, one of the most barren countries in the universe.

The swell of the river varies in different parts of its channel. In Upper Egypt it is from thirty to thirty-five feet; at Cairo it is about twenty-three feet, whilst in the northern part of the Delta it does not exceed four feet, which is owing to the artificial channels and the breadth of the inundation. Yet the four feet of increase is as necessary to the fertility of the Delta as the twenty-three or the thirty feet elsewhere. The river begins to swell in June, but the rise is not rapid or remarkable until early in July; the greatest height is attained about the autumnal equinox, and the waters remain nearly at the same level until the middle of October. After this the subsidence is very sensible, and the lowest point is reached in April. These phenomena, however striking, are by no means peculiar to the Nile; they are more or less common to all rivers whose volume is annually augmented by the periodical rains which fall within the tropics; but there is no river the annual swelling of which is so replete with important consequences, or so essential to the existence of a nation. This is because Egypt depends wholly upon the river for its fertility; and wherever the

influence of its inundation does not extend, there the soil is desert. Very little rain ever falls in Egypt. In Upper Egypt it is scarcely known; and in Lower Egypt, a very slight and almost momentary shower is all that is occasionally experienced even during the cool part of the year. Therefore the irrigation which the land receives through the direct overflow of the Nile, and by means of the canals which convey its waters where the inundation does not directly extend, is quite essential to that fertility for which Egypt has in all times been proverbial. The inhabitants of Egypt have with great labour cut a vast number of canals and trenches through the whole extent of the land. These canals are not opened till the river has attained a certain height, nor yet all at the same time, as then the distribution of the water would be unequal. The sluices are closed when the water begins to subside, and are gradually opened again in the autumn, allowing the waters to pass on to contribute to the irrigation of the Delta. The distribution of the Nile water has always been subject to distinct and minute regulations, the necessity for which may be estimated from the common statement, that scarcely a tenth part of the water of the Nile reaches the sea in the first three months of the inundation. Minute regulations are necessary in our own land for the equal distribution of streams which afford power to mills. In a country where fertility essentially depends upon one great fertilizing power, such regulations must have been amongst the first steps in the laws of civilization. Lower Mesopotamia, which in the time of Herodotus competed the palm of exuberant production with Egypt, is now a desert, in consequence of the abandonment of a system of irrigation, which, from actual inspection, we should judge to have been nearly analogous to that which continues to fertilize the land of the Nile. During the inundation, the whole level country appears like a series of ponds and reservoirs; and it is not merely the saturation of the ground, but the deposit of mould or soil which takes place during the overflow, that is so favourable to the agriculture of Egypt. This mud contains principles so friendly to vegetation, that it is used as manure for those places which have not been adequately benefited by the inundation; and, on the other hand, where the deposit has been complete, the people are said to mingle sand with it to abate its strength. The cultivation of the ground commences as soon as the waters have retired, and where the soil has been sufficiently saturated, the labours of agriculture are exceedingly light. The seed is sown in the moistened soil, and vegetation and harvest follow with such rapidity as to allow a succession of crops, wherever water can be commanded. The influence of the river upon the condition and appearance of the country can only be estimated by comparing its aspect in the season which immediately precedes, with that which follows the inundation. Volney has illustrated this by observing, that the surface of the land successively assumes the appearance of an ocean of fresh water, of a miry morass, of a green level plain, and of a parched desert of sand and dust.

It was the feeling generally entertained of their entire dependence upon the Nile, co-operating with the natural disposition of man to look rather to the secondary causes than to the infinitely great and good God from whom all blessings come, which led the Egyptians to deify their Nile, which had its appointed priests, festivals, and sacrifices: and even now, under the sterner system of the Moslem religion, the reverence entertained for this stream, still called "the Most Holy River," and the rites with which its benefits are celebrated, seem to exhibit a tendency towards the same form of acknowledgment and gratitude.

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THE KINKAJOU.



[The Kinkajou.]

THE kinkajou is one of those animals which the naturalist has rarely an opportunity of observing in captivity; nor indeed are there many museums of Europe in which a preserved specimen is to be found. To these causes are to be attributed the obscurity attending its history, and the contradictory opinions which have been entertained respecting its true character and the station it occupies. Desmarest was the first who assigned to this animal its true situation among the *plantigrade carnivora*. Illiger formed for it a genus under the title of *cercoleptes*, which is that now generally retained. The species (a single one, as far as we know) is the *cercoleptes condivolvulus*. The kinkajou is a native of Southern and Intertropical America, where it appears to be extensively spread; and is known under different appellations. In New Grenada it is called, by the native Indians, *guchumbi*, and *manaviri* in the mission of Rio Negro. In its manners it much resembles the *coati-mondi* (*nasua fusca*), but differs from that animal not only in the shape of the head, which is short and compact, but also in having a *prehensile tail*. Of recluse and solitary habits, the kinkajou lives for the most part among the branches of the trees in large woods or forests, and is in every respect well adapted for climbing: being, however, decidedly nocturnal, it is but little exposed to the

observation even of those who sojourn among the places frequented by it. During the day it sleeps in its retreat, rolled up like a ball, and, if roused, appears torpid and inactive. As soon, however, as the dusk of evening sets in, it is fully awake, and is all activity, displaying the utmost restlessness and address, climbing from branch to branch in quest of food, and using its prehensile tail to assist itself in its manœuvres. Few mammalia are more incommoded by light than the kinkajou: we have seen the pupils of the eyes contracted to a mere round point, even when the rays of the sun have not been very bright, while the animal at the same time testified by its actions its aversion to the unwelcome glare.

In size the kinkajou is equal to a full-grown cat, but its limbs are much stouter and more muscular, and its body more firmly built. In walking, the sole of the foot is applied fairly to the ground, as in the case of the badger. Its claws are strong and curved, the toes on each foot being five. The ears are short and rounded. The fur is full, but not long, and very closely set. There is no animal among the carnivora (as far as our experience goes) in which the tongue is endowed with more remarkable powers of extension. Among ruminating animals, the giraffe is as we know, capable of extending this organ to a very

great length, and of using it much in the same manner as the elephant does the extremity of his proboscis, drawing down by it the twigs and boughs of the trees, upon the leaves of which the creature feeds;—in like manner can the kinkajou thrust forth its tongue, a long and slender instrument, capable of being inserted into crevices, or fissures, in search of insects, reptiles, or the eggs of birds. Baron Humboldt informs us that this animal is an extensive devastator of the nests of the wild bee, whence the Spanish missionaries have given it the name of “honey-bear,” and that it uses its long tongue to lick up the honey from the cells of the comb. In its fondness for honey it is not singular, for the ratel (*mellivora capensis*), a plantigrade allied to the badger, is also celebrated for the havoc it makes among the hives of the wild bee in order to obtain the luscious contents. In addition, however, to this food, birds, eggs, small animals, roots, and fruits constitute the diet of the kinkajou; and, as we have seen, it will draw these articles towards it with its tongue, when presented just within its reach. In drinking it laps like a dog, and also makes use of its fore-paws occasionally in holding food, and even in conveying it to the mouth, as well as in seizing its prey. In its aspect there is something of gentleness and good nature; and in captivity it is extremely playful, familiar, and fond of being noticed. In its natural state, however, it is sanguinary and resolute.

The kinkajou was not unknown to Buffon, who, however, for a long time confounded it with the glutton,—nor was he aware of his error until an opportunity occurred of his seeing two of these animals. One was exhibited at Saint Germain in 1773, under the title of “an animal unknown to naturalists.” The other was in the possession of a gentleman in Paris, who brought it from New Spain. This latter individual was suffered to go at large, being perfectly tame; and, after rambling about all night, would return to its accustomed sleeping-place, where it was always to be found in the morning. “Without being docile,” says M. Chauveau, in a note to Buffon, “it is familiar, but only recognises its master, and will follow him. It drinks every fluid,—water, coffee, milk, wine, and even brandy if sweetened with sugar, with which latter it will become intoxicated; but it is ill for several days afterwards. It eats, with the same indifference, bread, meat, pulse, roots, and especially fruits. It is passionately fond of scents, and eagerly devours sugar and sweetmeats. It darts upon poultry, always seizing them under the wing. It appears to drink the blood only, leaving them without tearing the body to pieces. When the choice is at its option, it prefers duck to fowl, but it fears the water.”

M. de Sive, speaking of the kinkajou exhibited at St. Germain, observes, that it was at first very good tempered, but soon began to be savage, in consequence of being perpetually irritated by the public. He notices also its dexterity in climbing, and adds that “it often rests on its hind limbs, and scratches itself with its fore paws, like monkeys. * * * It feeds like a squirrel, holding between its paws the fruits or vegetables which are given to it. It has never been offered meat or fish; when irritated it endeavours to dart on the assailant, and its cry in anger resembles that of a large rat. * * * It dexterously uses its tail in a hook-like manner to draw towards itself different objects it wishes to obtain; it is also fond of suspending itself by the tail, twining it round anything which is within its reach.” Notwithstanding, however, that Buffon had seen the kinkajou, so little was known as to its manners in a state of nature, and the range of its habitat, that this writer, misled by an account of Denis (*Geographical and Historical Description of the Coasts of North America*, Paris, 1672) regarded an animal called by this name

(which indeed has been often applied to the glutton) as the one before us,—and quotes the words of Denis, who states it to lurk among the branches, and drop down upon the elk or moose deer, (as the glutton is also erroneously said to do,) twist its tail round its neck, and bite it above the ears, till at length the deer sinks down exhausted. The account of Denis is altogether unworthy of notice.

An individual of this species has recently died, at the gardens of the Zoological Society: it had lived in the possession of the Society about seven years, and was remarkable for gentleness and its playful disposition. During the greater part of the day it was usually asleep, rolled up in the inner partition or box of its large cage: this indeed was invariably the case in the morning, unless purposely disturbed, but in the afternoon it would often voluntarily come out, traverse its cage, take food, and play with those to whom it was accustomed. Clinging to the top wires of its cage with its hind-paws and tail, it would thus suspend itself, swinging backwards and forwards, and assuming a variety of antic positions. When thus hanging, it could bring up its body with the greatest ease, so as to cling with its fore-paws as well as the hind pair to the wires, and in this manner it would travel up and down its cage with the utmost address, every now and then thrusting forth its long tongue between the wires, as if in quest of food, which if offered outside its cage, it would generally endeavour to draw in with this organ. It was very fond of being stroked and gently scratched, and when at play with any one it knew, it would pretend to bite, seizing the hand or fingers with its teeth, as a dog will do when gambolling with its master, but without hurting or intending injury. As the evening came on, its liveliness and restlessness would increase. It was then full of animation,—traversing the space allotted to it in every direction,—examining every object within its reach,—rolling and tumbling about, and swinging to and fro from the wires of the cage: nor was its good-humour abated; it would gambol and play with its keepers, and exhibit in every movement the most surprising energy. In this state of exercise it would pass the night, retiring to rest on the dawn of the morning. The age of this individual is not ascertained; the state of its teeth, however, which are much worn down, shows it to have attained an advanced period; its colour was a pale yellowish grey, inclining to tawny, the hairs, in certain lights, having a glossy appearance. Its dissection after death fully confirmed the propriety of assigning it a place among the plantigrade carnivora.

THE HIGH-WHEEL.

[From a Correspondent.]

“THERE is something very picturesque in the great spinning-wheels that are used in this country for spinning the wool; and if attitude were to be studied among our Canadian lasses, there cannot be one more becoming or calculated to show off the natural advantages of a fine figure than spinning at the big-wheel.”

‘*Backwoods of Canada,*’ by the *Wife of an Emigrant Officer.*

THE foregoing sentence naturally recalls to the mind of a septuagenarian a state of society in England long since gone by, when the high-wheel (another name for what the lady calls the big-wheel) was in use in every cottage and farm-house. Improvements in machinery have banished this domestic utensil from our fire-sides, and the high-wheel and the low-wheel have both followed the fate of their once useful and general precursor, the distaff.

The high-wheel was a simple but effective machine, and, perhaps on that very account, difficult to describe. The body, a rectangular block of wood of about three feet in length, nine or ten inches in breadth, and two inches in thickness, was supported in an inclining

position by four round legs, such as are generally used in a common three-footed stool, and made an angle with the horizon of about twenty-five or thirty degrees. On the far side of the lower end was fixed an upright support, about thirty inches in height, at the top of which was the axle or peg on which the wheel turned round. This wheel was very light in its make, and consisted of a thin rim about four inches broad, connected to the nave by about a dozen of light ornamented spokes. At the higher end of the block was the support for the spindle, which, furnished with a whorl, (a small pulley cut in grooves for confining the wheel-band,) turned in two projecting gudgeons of stout sole-leather, the spindle itself (of steel, well polished) projecting about nine or ten inches from the body of the wheel. A double band of twisted worsted ran round the wheel and the whorl, by which motion was communicated to the spindle, and the operation of spinning performed; and when it is considered that the whorls were not more than an inch or an inch and a half in diameter while the wheel itself was nearly five feet, the spindle must have possessed a very considerable comparative degree of velocity.

To apply this machine to use, a roll of wool (previously taken from the card) of about twelve or thirteen inches in length, and very light in its texture, was applied to the point of the spindle by the left hand of the spinner, she at the same time touching the spokes of the wheel with her right to give it a gentle motion, and attach the new wool to an old half-spun thread left for the purpose on the spindle; she then turned more rapidly, keeping the wool in her left hand, and, stepping backward at the same time, drew out the thread, still keeping her right hand upon or near to the wheel to regulate the motion, and, her left arm rather extended, she continued to step backward till she got to the utmost length of the thread which her roll of wool would produce, when, reversing the motion of the wheel to take up the thread already spun, she stepped forward, and, attaching another roll of wool, repeated the operation as before.

Of the picturesqueness of the spinner I cannot say much;—youth can always show itself to advantage: but when the wheel was managed by an attenuated old woman, drooping under the infirmities of age,—when her shrivelled arms and unfleshed elbows were almost the only parts exposed to view,—and when her knees trembled under her with the fatigue of her daily exercise—perhaps a walk backwards and forwards, and in a stooping position, of not less than twelve or fourteen miles—it exhibited but little of grace or beauty.

The high wheel appears to have succeeded the distaff, and, in comparison with that machine, was a very great improvement. As it was formerly spun, all the yarn, or worsted, was used for stockings, or for weaving with linen-thread into the cloth called “linsey-woolsey,” which was the universal wear of the peasantry, as jackets and breeches for boys, and frequently for men, and for petticoats and other garments for women. Our progenitors seem principally to have aimed at what was useful and substantial. A servant-girl at that time, with her short bed-gown, thick leather stays, her linsey-woolsey petticoat, and thick hob-nailed shoes, was not a very graceful object; but she perhaps had other recommendations which were of infinitely greater value. She could spin her own garments and knit her own stockings; her face bore the ruddy hue of health; and, though her manners might be rough, her morals were uncorrupted: she would make an industrious wife, and she would bring up a family ashamed of eating the bread of idleness.

The low-wheel was an improvement on the high-wheel, intended at first for spinning flax, or, as it is generally called, “tow.” At this the spinner is seated,

and motion is given by a treadle. To obviate the walking necessarily attached to the high wheel, it was presently adapted to the spinning of the finer kinds of wool, and was found to produce a thread of yarn of superior fineness. In every farm-house the wheel was the evening fire-side companion; and while the mistress or the dame was spinning fine tow, the servant-girl was allowed to spin *harding* for herself, after the termination of the day's labour. The yarn was sent periodically to the weaver, and the servant was allowed to have a part of her own, for present use, woven at the end of her mistress's web, either as linsey-woolsey or as linen. The high and the low wheel have both almost totally disappeared, being completely superseded by the improved machinery of modern times, and the change which has taken place in the habits of the people and in every part of our domestic economy.

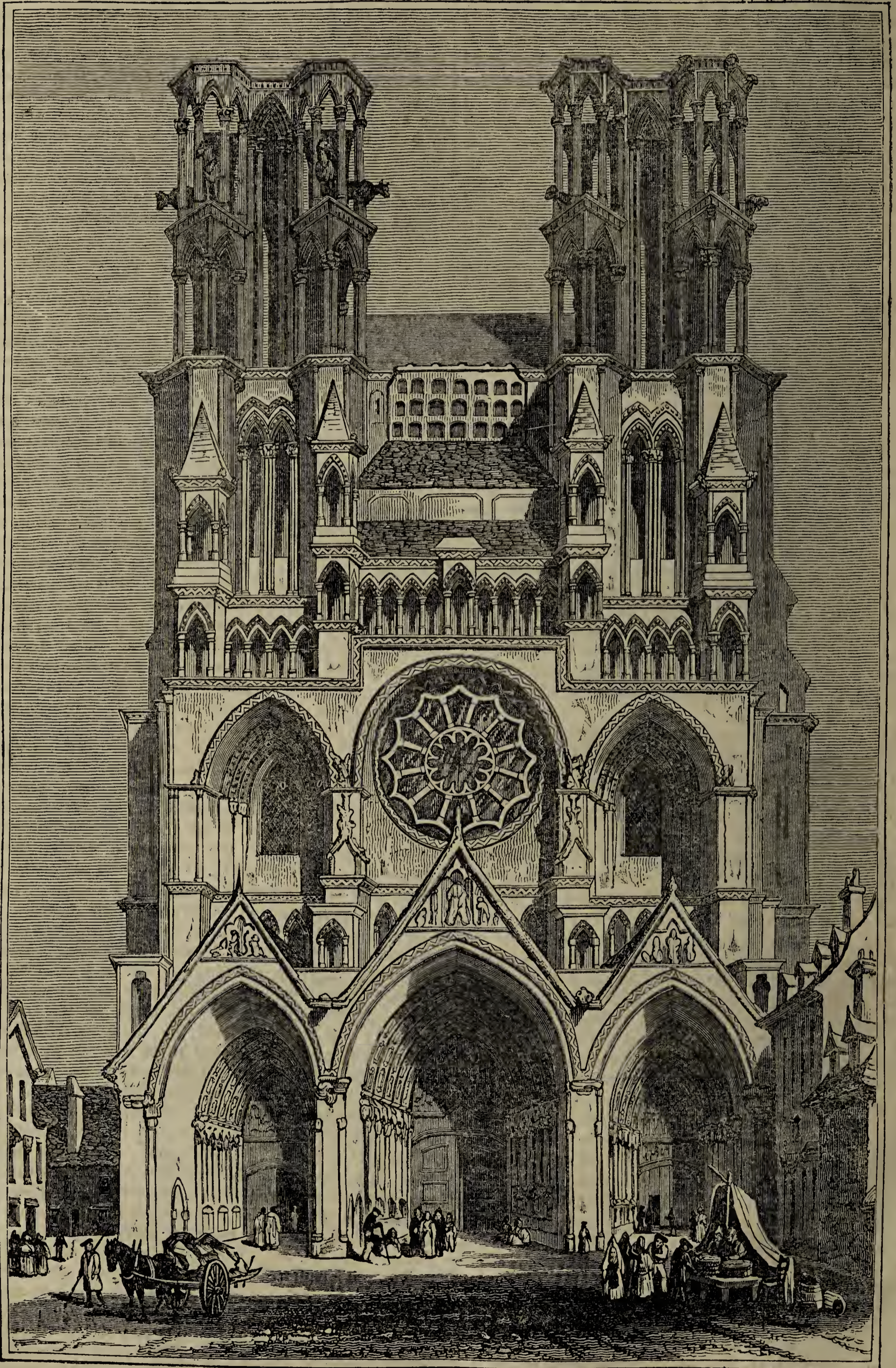
CATHEDRAL OF LAON.

LAON, one of the most ancient cities in the north of France, is the chief town of the department of the Aisne. Before the last territorial division of France, a small district surrounding Laon was called the Laonois, but it was included in the larger province of Picardy. Picardy was bounded on the west by the English Channel, and on the south-west by Normandy. It was, after Normandy, the province with which the English were most intimately connected during the period which preceded the consolidation of France as a European power of the first rank. The town is built on a hill which stands alone in the midst of a vast plain. It was a natural defence, which doubtless was soon rendered more impregnable on account of the constant want of order which prevailed. The castle, built on the site of Laon, was the means of affording protection against the violence of power. Clovis granted some privileges to the population which had resorted hither to avail themselves of this advantage, and an episcopal church was founded in 515, by St. Remy. The last kings of France of the second race, hemmed in by powerful contenders for the territory of what now constitutes the kingdom, found their power confined within a small extent of country around Laon. Louis d'Outre-mer, after having twice besieged the town, died a prisoner there in 953. Laon was one of the earliest towns in the north of France in which the inhabitants emancipated themselves from the shackles of feudal power. Within Amiens, Beauvais, Noyon, and other places which had also obtained a considerable degree of independence, there existed a spirit of rough freedom, the influence of which deserves to be duly estimated by the student of this period of European history. In 1419 Laon was taken by the English, but they were subsequently driven out by the inhabitants who rose against them. It enjoyed some repose until the wars of the League; but it surrendered, in 1594, to Henry IV. The citadel which he caused to be built is destroyed. In the seventeenth century Laon suffered much, in consequence of the wars of religion and the Fronde. In fact, throughout the history of France it has been generally connected with the leading events, or in some manner experienced their influence. This arose chiefly from its position as a place of defence and its situation on the frontiers. The town and castle were anciently regarded as one of the ramparts of France. An old wall flanked with little towers is all that remains of its former defences.

Laon is about 75 miles from Paris, and is visible on all sides to the distance of sixteen or eighteen miles. The town occupies the greater part of the crown of the hill, which in one place extends in a forked direction. On one arm of the hill stand the ruins of an abbey. The view from the Boulevards on the ancient walls is

extensive. Laon has only one considerable street; the others are narrow and ill-built. The population in 1831 was 8400. There are five fauxbourgs at the foot of the hill. The usual establishments of a town of this class are to be found at Laon.

The cathedral, as will be seen by the cut, is a fine old building. It existed in 1114, but the precise date of its erection is not known. Its length is 333 feet, breadth 78 feet, and height of the towers 179 feet. The only description we have been able to obtain of the cathedral is



[West Front of Laon Cathedral.]

from the MS. Journal of a Tourist, who communicated his notes to the editor of 'Sir David Brewster's Edinburgh Encyclopædia.' The writer says: "The open buttresses, and the long open windows in the square towers, give a peculiar air of lightness to the building when seen from a short distance; but at a considerable distance, and particularly in the night, they give it the appearance of a scaffolding, the light coming through in every direction. The great portal is not unlike that of Rheims, but it is less elegant in the sculptures. There is a small spire on the south tower of the cathedral. The interior of the cathedral is very fine. In the nave are ten circular pillars on each side, with capitals; two of them on each side having four small columns round it. Above the choir is a most magnificent circular window of painted glass. There is another fine circular window in the nave, above an excellent organ, and at each end of the transept."

The bishopric was suppressed at the Revolution. Its revenues amounted to 35,000 livres, and the bishop was invested with the title and privileges of a duke and peer of France, and took part in the ceremonies at coronations. The chapter consisted of four dignitaries and eighty-four prebends.

THE CHEVIOT HILLS.

[From a Correspondent.]

"To chase the deer with hound and horn
Earl Percy took his way;
The child may rue that is unborn
The hunting of that day."

Ballad of Chevy Chase.

THERE are but few who, in the early period of life, have not been charmed with the old, spirited ballad of 'Chevy Chase,'—who have not admired "Earl Douglas on his milk-white steed," and Earl Percy leading on his English bowmen,—or who have not felt sympathy for the courageous Witherington, who, "when his legs were smitten off, still fought upon his stumps;"—yet the theatre of this border-battle seems to be almost as little known as the real occasion of the quarrel.

The Cheviot Hills are a high, rocky range, which serves as a natural boundary betwixt England and Scotland: on the southern side, the country was under the command of the Earl of Northumberland, on the north, under that of Earl Douglas, both of them at the time apparently Lord Wardens of the Marches, and both noblemen of high spirit, ready to give or avenge an affront. Percy, according to the song, determined to cross the boundary on a hunting excursion, without asking leave of his neighbour Douglas, and the latter called up all his forces to drive the aggressor back. A battle ensued, as described in the ballad, and the two earls, with hundreds of their vassals, were left dead upon the field.

These hills, though remarkable for this event, and for other battles fought in their immediate neighbourhood, seem not to have awakened the interest of travellers so much as might have been expected, yet they would well repay a journey up their steep and rugged sides. The celebrated Defoe, the author of 'Robinson Crusoe,' and a political writer of no mean character, visited their summit in 1723. "Here," he observes in a letter from Kelso, "we made a little excursion into England, and it was to satisfy a curiosity of no extraordinary kind neither. By the sight of Cheviot Hills, which we had seen for many miles riding, we thought, at Kelso, we were very near them, and had a great mind to take as near a view of them as we could; and taking with us an Englishman, who had been very curious in the same enquiry, and who offered to be our guide, we set out for Wooller, a little town, lying, as it were, under the hill.

"Cheviot Hill or Hills are justly esteemed the highest in this part of England, and of Scotland also; and, if I may judge, I think 'tis higher a great deal than the mountain of Mairock, in Galloway, which, they say, is two miles high.

"When we came to Wooller, we got another guide to lead us to the top of the hill; for, by the way, tho' there are many hills and reachings for many miles, which are called Cheviot Hills, yet there is one *pico*, or master-hill, higher than all the rest by a great deal, which at a distance looks like the Pico-Teneriffe, at the Canaries, and is so high, that I remember it is seen plainly from Roseberry Topping, in the East Riding of Yorkshire, which is near sixty miles distant. We prepared to clamber up this hill on foot, but our guide laugh'd at us, and told us that we should make a long journey of it that way: but, getting a horse himself, told us he would find a way for us to get up on horseback; so we set out, having five or six country boys and young fellows, who came on foot, volunteering to go with us. We thought they had only gone for their diversion, as is frequent for boys; but they knew well enough that we should find some occasion to employ them, and so we did, as you shall hear.

"Our guide led us, very artfully, round to a part of the hill where it was evident, in the winter season, not streams of water, but great rivers came pouring down from the hill in several channels, and those (at least some of them) very broad; they were overgrown on either bank with alder-trees, so close and thick, that we rode under them as in an harbour. In one of these channels we mounted the hill, as the besiegers approach a fortified town, by trenches, and were gotten a great way up before we were well aware of it. But, as we mounted, these channels lessened gradually, till at length we had shelter of the trees no longer; and now we ascended till we began to see some of the high hills, which before we thought very lofty, lying under us, low and humble, as if they were part of the plain below, and yet the main hill seem'd still to be but beginning, or as if we were but entering upon it.

"As we mounted higher, we found the hill steeper than at first, also our horses began to complain, and draw their haunches up heavily, so we went very softly. However, we mov'd still, and went on, till the height began to look really frightful, for I must own I wished myself down again: and now we found use for the young fellows that ran before us; for we began to fear, if our horses should stumble or start, we might roll down the hill together; and we began to talk of alighting, but our guide called out and said, 'No, not yet; by-and-by you shall;' and with that he bid the young fellows take our horses by the head-stalls of the bridles and lead them. They did so, and we rode up higher still, till at length our beasts fail'd us altogether, and we resolv'd to alight; and tho' our guide mock'd us, yet he could not prevail or persuade us; so we work'd it upon our feet, and with labour enough, and sometimes began to talk of going no farther.

"We were the more uneasy about mounting higher, because we all had a notion that, when we came to the top, we should be just as upon a pinnacle,—that the hill narrowed to a point, and we should have only room enough to stand, with a precipice every way round us; and with these apprehensions we all sat down upon the ground, and said we would go no farther.

"Our guide did not at first understand what we were apprehensive of; but at last by our discourse he perceived the mistake, and then not mocking our fears, he told us, that indeed if it had been so, we had been in the right; but he assured us there was room enough on the top of the hill to run a race if we thought fit, and we need not fear anything of being blown off the precipice, as we had suggested; so he encouraging us we

went on, and reach'd the top of the hill in about half an hour more.

"I must acknowledge I was agreeably surprised when, coming to the top of the hill, I saw before me a smooth, and with respect to what we expected, a most pleasant plain, of at least half a mile in diameter; and in the middle of it a large pond, or little lake of water, and the ground seeming to descend every way from the edges of the summit to the pond, took off the little terror of the first prospect, for when we walkt towards the pond, we could but just see over the edge of the hill; and this little descent inwards, no doubt, made the pond, the rain-water all running thither.

"The day happened to be very clear, and to our great satisfaction very calm, otherwise the hight we were upon would not have been without its dangers. We saw plainly the smoke of the salt-pans at Shields, at the mouth of the Tyne, seven miles below New Castle, and which was south about forty miles. The sea, that is, the German Ocean, was as if but just at the foot of the hill, and our guide pointed to show us the Irish Sea; but if he could see it, knowing it in particular, and where exactly to look for it, it was so distant that I could not say I was assur'd I saw it. We saw likewise several hills, which he told us were in England, and others in the West of Scotland; but their names were too many for us to remember, and we had no materials there to make minutes. We saw Berwick East, and the hills called Soutra Hills North, which are in sight of Edinburgh. In a word, there was a surprising view of both the united kingdoms, and we were far from repenting the pains we had taken.

"Nor were we so afraid now as when we first mounted the sides of the hill, and especially we were made ashamed of those fears, when to our amazement we saw a clergyman and another gentleman, and two ladies, all on horseback, come up to the top of the hill, with a guide also as we had, and without alighting at all, and only to satisfy their curiosity, which they did it seems. This indeed made us look upon one another with a smile, to think how we were frighted at our first coming up the hill. And thus it is in most things in nature. Fear magnifies the object, and represents things frightful at first sight, which are presently made easy when they grow familiar.

"Satisfied with this view, and not at all thinking our time or pains ill bestowed, we came down the hill by the same route that we went up, with this remark, by the way, that whether on horseback or on foot, we found it much more troublesome and also tiresome to come down than to go up.

"When we were down, our guide carry'd us not to the town of Wooller, where we were before, but to a single house, which they call Wooller-Haugh-Head, and is a very good inn, better indeed than we expected, or than we had met with, except at Kelso, for many days' journey. There we had very good provisions, very well dress'd, and excellent wine. The house is in England, but the people that kept it were Scots; yet everything was well done, and we were mighty glad of the refreshment we found there.

"Here we inquired after the famous story of 'Cheviot Chase,' which we found the people there have a true notion of, not like what is represented in the ballad of 'Chevy Chase,' which has turn'd the whole story into a fable; but here they told us what all solid histories confirm, namely, that it was an in-road of the Earl of Douglass into England, with a body of an army, to ravage, burn, and plunder the country, as was usual in those days; and that the Earl of Northumberland, who was then a Piercy, gathered his forces, march'd with a like army, and a great many of the gentry and nobility with him, to meet the Scots;

and that both the bodies meeting at the foot of Cheviot Hills, fought a bloody battle, wherein both the earls were slain fighting desperately at the head of their troops; and so many kill'd on both sides that they that outliv'd it went off respectively, neither being able to say which had the victory."

Such is the account of the ascent of the Cheviots given by this quaint and animated writer. He mentions afterwards the visiting of the spot where the two earls were killed; and he further observes that he also examined Flodden Field, which is within "some six or seven miles" of the same place, and which is remarkable for the defeat of the Scottish invading army, and the death in battle of their king, James IV., in the year 1538, when the Earl of Surrey, for his valiant conduct, obtained an honourable augmentation of his arms, since always borne by the noble family of Howard.

Our author must have made a wrong estimate of the height of Cheviot when he supposed it to be more than two miles: it is now found to have no greater altitude than 2658 feet, and consequently is considerably lower than many mountains either in England, Scotland, or in Wales.

BILLS OF MORTALITY.

As it is probable that some comprehensive measure for the proper registration of births, marriages, and deaths will soon pass the legislature, a few remarks on a subject so much neglected and misunderstood in this country may be acceptable.

In an analysis of the bills of mortality in the 'Companion to the Almanac for 1835,' the writer says, "Looking at one peculiar evidence of advancement, a statistical physician might be pardoned if he selected as a touchstone of civilization good bills of mortality. That these interesting records might be made perfect, or nearly so, it would be requisite that the cause of each death should be certified by a well-educated practitioner; and to qualify him for doing this, an anatomical examination of the body would be necessary in many or most cases. The friends of the deceased would thus have an opportunity of comparing the physician's diagnosis given during life with the actual appearances found after death; and the check thus afforded to careless practice would advance medicine in a very material degree."

In a little pamphlet recently published by Dr. Cleland of Glasgow is the following sketch of the history of bills of mortality:—

"Bills of Mortality are understood to contain a list of births, marriages, and burials, taken from parochial registers, at stated periods. When the registers are accurately kept, and the various enumerations methodically arranged, in connexion with the classified population of a place, data are produced, from which the political economist may draw beneficial results.

"The keeping of parish registers commenced in England in the year 1538, in consequence of an injunction issued in that year by Thomas Cromwell, who, after the abolition of the pope's authority in this kingdom, in the reign of Henry VIII., had been appointed the king's vicegerent in ecclesiastical affairs.

"About the beginning of the seventeenth century, such registers appear to have been established in most parts of Europe; but it was not until the year 1662 that they began to attract public notice, and to be considered as the sources of valuable and interesting information. In that year John Graunt, a citizen of London, published his 'Natural and Political Observations on Bills of Mortality.' The London bills, or accounts of baptisms and burials, appear to have been occasioned by the plague, and to have been begun in the year 1592, a time of great mortality. They were

afterwards discontinued, but were resumed in 1603, after the great plague of that year. They have ever since been continued weekly, and an annual bill also has been regularly published. In 1629 the number of deaths by the different diseases* and casualties was first inserted in them; also the distinction of the sexes, and these have continued ever since. But it is in the totals only of the baptisms and burials that the sexes are distinguished in these bills; they do not show how many of each sex died of each disease; neither have they since 1728, when the distinction of the ages of the dead was first introduced, shown how many of each sex died in each interval of age, but only the total number of both sexes.

“Although Mr. (afterwards Major) Graunt’s book had but few attractions for the generality even of reading men, who cannot endure the fatigue of thinking closely for any length of time, yet by showing the usefulness of parochial registers and bills of mortality, he contributed to form a taste for those inquiries among thinking men, and, consequently, to improve both the registers and the bills derived from them; so that from his time the subject has been continually cultivated more and more. Parish registers in some parts of the continent of Europe are now kept with more care than formerly, and a succession of works of considerable merit has been published on the subject, containing an important part of the natural and political history of our species, and affording valuable matter for the science of political economy. As the ages at which the deaths took place were not inserted in the London bills till 1728, Major Graunt could not avail himself of that important information, but made a fruitless attempt to determine the law of mortality without it.

“The Breslaw bills appear to have been the first wherein the ages at which the deaths took place were inserted; and the most important information which bills of mortality can afford was first drawn from them by Dr. Halley, who, in 1692, constructed a table of mortality for Breslaw from those bills for the five preceding years.

“In 1771 the first edition of Dr. Price’s ‘Observations on Reversionary Payments’ made its appearance, containing observations on the expectations of lives,—the increase of mankind,—the number of inhabitants in London,—and the influence of great towns on health and population. This work added greatly to the information already before the public connected with bills of mortality.

“In 1774-5, Dr. Haygarth of Chester wrote two valuable papers, wherein he gave bills of mortality for that city, in a form calculated to exhibit at one view the most useful and interesting information respecting population. About the same time Dr. Perceval produced a paper respecting the population of Manchester.

“During a period of nine years, commencing with 1779 and ending with 1787, Dr. Heysham of Carlisle kept accurate registers of the births and of the deaths at all ages, in the two parishes of that city and environs; also the diseases and casualties which the deaths at each age were occasioned by; and the sexes were in all cases distinguished. These excellent registers were kept with great care and skill, on the plan of Dr. Haygarth above-mentioned, and included all dissenters within the two parishes. Dr. Heysham published them from year to year, as they were made, and accompanied them with valuable observations on the diseases of each year. The value of these bills was greatly enhanced by two enumerations of the people within the two parishes, the one

* The publication of a partial list of diseases is worse than useless. It is well known to the medical profession, and to the statist, that it cannot lead to any beneficial results; and it is evident that general lists of diseases cannot be procured without compulsory enactment.

made in January, 1780, the other in December, 1787, in both of which the ages were distinguished, but not the sexes of each age, though the totals of each sex were. These documents, printed in convenient forms, may be found in ‘Milne’s Treatise on Annuities.’

“The mortality bills of Breslaw, Chester, and Carlisle, seem to have been drawn up with much care, but no reliance whatever can be placed on the London bills. This has been long known to the political inquirer, and latterly to the public, through the medium of the ‘Report of the Select Committee on Parochial Registration,’ containing the minutes of evidence ordered to be printed by the House of Commons on 15th August, 1833.

“One of the witnesses before the Committee, John Tilly Wheeler, Esq., Clerk to the Worshipful Company of Parish Clerks in the City of London, in his evidence, stated that the Company is of old standing, having been first incorporated by 17th Henry III., in 1233. The next charter was the 4th James I.; the next 11th Charles I.; and the last was in the 14th of that reign. The Company has the exclusive privilege of issuing the bills of mortality for London, including the 17 parishes in the liberties of the city without the walls, the parishes in the borough of Southwark, and 24 parishes in Middlesex and Surrey. As to the registration of births, children who are half baptized, *i. e.*, children who are baptized without sponsors, are not registered. These may amount to about one in ten. Great numbers of children are never brought to be registered. As to burials there is an act of parliament which makes it imperative on churchwardens to appoint two searchers in each of the parishes within the bills of mortality. The office of searcher is confided to two old women, generally paupers, who are legally entitled to ask a fee of 4*d.* and on their hearing from the parish clerk that there has been a death in any house, they go and demand a sight of the body. Being very needy people, they are open of course to any fee that may be given them to dispense with their office altogether. Instead of 4*d.* if they get one shilling, or half-a-crown, they go away without looking at the body. Indeed they are perfectly inadequate to the purpose, and no reliance can be placed on them or their reports of diseases by which persons die. From the circumstance of there being only 26,974 christenings registered in 1832, and 28,606 burials, while the population is increasing, there must be great inaccuracy in the bills, and moreover there are no burials registered which do not take place in churches or churchyards.”

Dr. Cleland details, in his pamphlet, the mode in which he set about obtaining the necessary information for the Glasgow bills of mortality. With reference to what the writer in the ‘Companion to the Almanac’ alludes to, in the paragraph quoted from his Essay, the following attempt of Dr. Cleland may be taken as an illustration:—

“About twenty years ago, when I first began to draw up the bills of mortality for this city [Glasgow], the causes of death were announced yearly in a newspaper, along with the gross number of burials; but as no confidence could be placed on such statements, I have, since that period, declined to publish a list of diseases; but being aware that if a correct list could be obtained at the census of 1831, when the population, births, marriages, and deaths were ascertained, it would be very beneficial, in a medical point of view, I addressed letters to 132 medical gentlemen in the city and suburbs, requesting that they would favour me with a return of the diseases of which their patients died, during the period in which I had requested the clergymen to give me a note of the number of baptisms. As I only succeeded with a small portion of the profession, the attempt became fruitless, and in all proba-

bility any future attempt will be unsuccessful, until a compulsory act of the legislature, regarding parochial registers for births, marriages, and deaths be obtained."

"From a recent official return," continues Dr. Cleland, "of the population, births, and deaths in the kingdom of the Netherlands, where the compulsory law is strictly enforced, and the return as perfect as any in Europe, it appears that the population was 6,166,854, births 207,388; viz., males 106,481, females 100,907. Deaths 158,800; viz., males 81,742, females 77,058. In drawing results from these data I find them remarkably similar to those of Glasgow; viz., in the Netherlands there is one birth for 29 73-100th persons, and one death for 38 83-100th persons. In Glasgow there is one birth for 29 47-100th, and one death for 39 4-100th persons.

"That little credence can be given to the amount of mortality assigned for England and Wales, it is sufficient to say, that from the returns for the census of 1831, the compiler of the Government Digest, in giving the averages for ten years, ending in 1830, of the proportion of registered and unregistered burials to the population, he had no alternative but to state, that in Pembrokeshire it was one in 71 9-10ths of the population, in Anglesea 70 6-10ths, in Monmouthshire 62 2-10ths, while in Lancaster it was only 45 1-10th; in Surrey 47 7-10ths, in Northamptonshire 50 1-10ths. For all England 50 2-10ths, Wales 63 3-10ths, and for England and Wales 51. As the Parochial Registers in Scotland and Ireland are not more correct than in England, it is evident that until they are put on a better footing, the mortality of these countries cannot be ascertained with any degree of accuracy."

It is to be hoped that this most important subject will soon be placed on a better footing; and that the system of registration in Great Britain will no longer be reproached as the most imperfect in Europe. In this respect we are far behind France, Belgium, Holland, many parts of Germany and Sweden, where the registries are admirably kept. There are some objections, however, to the modes adopted on the Continent, which, if avoided in the proposed measure, will reverse the character our registries have hitherto borne.

ANCIENT KITCHEN AT STANTON HARCOURT.

STANTON HARCOURT, in Oxfordshire, is situated about nine miles north-west of Abingdon, and four miles and a-half south-east of Witney. The manor was granted by Adeliza, the second queen of Henry I., to her kinswoman Milicent, wife of Richard de Camoil, whose daughter Isabel married Robert de Harcourt, in the possession of whose family it remained more than 600 years, being their chief place of residence till the latter part of the seventeenth century. It is now the property of the present Archbishop of York.

A very curious kitchen, which is the most remarkable remain of the ancient mansion, is the subject of the accompanying sketch. This part of the building is evidently of great antiquity, but the exact date of its construction is uncertain. Dr. Littleton, Bishop of Carlisle, is of opinion that the reign of Henry IV. was the period when the present windows were inserted; and the faint appearance of an arch seems to indicate that they are not now in their original state. In the turret is a stone staircase which leads to the battlements, the roof of which is tiled to the apex; it is surmounted by a griffin, *seiant* (sitting) on a small pedestal, holding an iron weathercock in the shape of a flag. The walls of the kitchen are of considerable thickness; it is a room twenty-nine feet square, and sixty feet high to the point of the roof. There are two fireplaces, opposite to each other, against the wall, either

of which is sufficiently capacious to roast an ox whole. But the principal peculiarity of this kitchen, and of which the only other example is said to be that which belonged to the ancient Abbey of Glastonbury, is the total want of a chimney of any kind,—the smoke making its exit at a line of holes, each about seven inches in diameter, which are all round the roof. They are covered, on the outside of the building, by falling doors of wood, part of which is visible between the battlements. The doors are raised according to the direction of the wind, those on the side the wind blows being shut, and those on the lee-side open. "Thus," says Dr. Plot, "one may truly call it either a kitchen within a chimney, or a kitchen without one." At the time of our visit to Stanton Harcourt (the summer of 1835), the traces of the smoke and soot extended fifteen feet wide on the walls at the back of each fire-place, and up to the sloping roof. This place is now used as the kitchen of the adjoining house, and the servants informed us that they find no inconvenience in their culinary operations from the smoke, as it goes up the wall at the back of the fire-place (one only being now in use), and out at the apertures at the bottom of the roof.

It was in the secluded and deserted mansion of Stanton Harcourt that Pope spent a part of two summers while he was occupied with the translation of Homer. One of the rooms is called "Pope's Study," and is situated in a tower which also bears the name of this celebrated poet. On a pane of glass in one of the casements he placed this inscription:—

"In the year 1718,
ALEXANDER POPE
Finished here
The Fifth Volume of Homer."

The pane of glass was afterwards preserved as a relic at Nuneham Courtenay.



[Ancient Kitchen.]

* * * The Office of the Society for the Diffusion of Useful Knowledge is at 59, Lincoln's Inn Fields.

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BARCELONA.



[Port and City of Barcelona.]

As the early navigators of the Archipelago crept along the coasts of the Mediterranean, making themselves acquainted first with the shores nearest to them, and soon afterwards with those more distant, it is extremely probable that the suggestions of antiquarians, which assign to Barcelona a high degree of antiquity, are in the main correct. Barcelona, like Marseilles, was most probably a Greek colony. Its Latin name was *Barcinona*, and it is said to have been so called after Hannibal Barcino, a Carthaginian general. The Romans, Goths, Moors, and French have successively been masters of the town. During the middle ages it was governed by its own sovereigns, who held the title of Counts of Barcelona; but their possessions passed into the hands of the kings of Aragon, and finally were reunited to the Spanish monarchy. In 1706 Barcelona resisted the pretensions of Philip V. to the Spanish throne, and sustained a siege which, though unsuccessful, afforded decisive proofs of the heroism of the Catalonian character. Barcelona has experienced on many occasions the calamitous effects of war. It endured no less than five sieges in the course of sixty-two years, including the one to which we have alluded, which were attended with the usual effects on public interests and individual prosperity. In 1715, after the siege of the preceding year, the population was reduced to 37,000 souls. In the course of half a century, the continuance of peace being favourable to industry, wealth

accumulated, and the population had increased, in 1769, to 54,000; eighteen years afterwards it had more than doubled, being 111,410. Thus, not only had the town been enabled to afford the means of livelihood to the inhabitants, who in consequence of the state of comfort in which they were generally placed had rapidly increased in number, but the progress of enterprise was sufficiently active to create a demand for the services of the adjoining population. In 1807 the population amounted to 130,000. From 1808 to 1814 Barcelona was occupied by the French. The capitalists were in a state of alarm, industry was paralysed, and an extensive emigration took place. In 1820 the population was 140,000. In 1821 the yellow fever ravaged Barcelona in a most disastrous manner, and it is computed that one-fifth of the inhabitants became its victims. But the infliction of a pestilence produces less effects on men's interests than the continual influence of those alarms which exist during a war, or when a country is torn by internal contests; and accordingly we find that, in 1830, nine years after the yellow fever had ravaged the town, the population had increased to 160,000 inhabitants. When Spain shall be more peaceful and industrious, and when the Levant becomes a more active scene of commerce, the intercourse of Barcelona with Turkey, with Greece, and Egypt, and the eastern shores of the Mediterranean generally, cannot fail to increase. This result will be the conse-

quence both of the geographical position of Barcelona, and of the character of the Catalonians.

Barcelona is the capital of the province of Catalonia. The form of this province is triangular. It has its base, 140 miles in length, on the Mediterranean; one of its sides, 120 miles in length, on the frontiers of France; and the other side, 140 miles in length, is formed by the province of Aragon, and at its south-western extremity, by the province of Valencia. Barcelona is nearer than Marseilles to Algiers and the coast of Africa by 150 miles. The natural productions of Catalonia are corn, wine, oil, flax, hemp, Indian corn, and rice; and the cork-tree is a native of the province. Almonds, figs, olives, nuts, and various kinds of fruit are abundant. There are mines of lead and of iron, and also marble mines. Near Barcelona a beautiful black marble, veined with white, is procured. The population of the province exceeds 1,000,000. Catalonia does not grow sufficient agricultural produce for its own consumption. It therefore imports from other provinces, and it sends to them in return calicoes, silk-handkerchiefs, ribands, tapes, cotton-stockings, silk-stockings, coarse cloth and serges, superfine cloths, woollen stockings, lace, steel goods, fire-arms, printed cottons, paper, dressed hides and shoes. The foreign trade of Barcelona is in brandy and wine, oil, nuts, cork-bark, wrought silk, wool, fruits. Its foreign imports consist of corn, sugar, salt-fish, spices, hides, cotton wool and cotton goods, linen, hardware, earthenware, &c. In 1820 the number of vessels entered in the port of Barcelona was 3838, of which 3625 were Spanish traders, seven ships of war, and 206 foreign ships. The principal part of the Spanish vessels were coasters of small burden. In 1829 the number of foreign vessels entered was 122; in 1830 there were 86; and 128 in 1831. The number of British ships in each year was twenty-four, nineteen, and eighteen. The number of Swedish vessels exceeded those of any other country, and were chiefly laden with salt-fish. The quantity of nuts annually exported to England is 30,000 bags, value 45,000*l.*, or 30*s.* per bag. The exportation of wine consists of about 30,000 pipes, of an average value of 4*l.* each; and 11,000 pipes of brandy, each pipe worth on an average about 8*l.* In 1831 the importation of fish from Sweden was 44,000 cwt.; Denmark 13,000 cwt.; and England 7,000 cwt.: the total value being about 76,800*l.* Scarcely any of the wine or brandy is exported to England. The imports from England were, in 1831, of cotton 10,000 bales, value 53,750*l.*; iron-hoops, 4000 bundles, value 3,200*l.*; and 7000 cwt. of fish, as above-mentioned, the value of which was 8,400*l.*

Laborde gives the following character of the Catalonians:—"The Catalonians are proud, haughty, violent in their passions, rude in discourse and in action, turbulent, untractable, and passionately fond of independence; they are not particularly liberal, but active, industrious and indefatigable; they are sailors, husbandmen, and builders, and run to all corners of the world to seek their fortunes. They are brave, intrepid, sometimes rash, obstinate in adhering to their schemes, and often successful in vanquishing, by their steady perseverance, obstacles which would appear insurmountable to others."

Much to the credit of the Barcelonese, we may state that, thirty years ago, they endeavoured to render the fine arts auxiliary to the improvement of manufactures. A school of design was established and supported by the inhabitants, and every one who desired might obtain admission. The number of masters in every department was sufficient for an extensive establishment. We have the testimony of M. Laborde, a few years after the school had been in existence, that it had in some measure attained the ends for which it was insti-

tuted. He says, in speaking of the designs for calico-prints,—“The designs have been much improved lately, and more taste has been displayed in them.”

Barcelona stands on a gentle eminence, between two rivers, and open to the sea on the east, north-east, and south-east. The river Bergos runs to the north and south-east of the town, and on the south the river Llobregat. The country is mountainous to the north and north-east. The latitude of Barcelona is 41° 21' and a few seconds. The climate is temperate, the winters mild, and the summers not too hot; but although the seasons, in their general character, are not irregular, yet in a single day great vicissitudes are frequently experienced at Barcelona. The east wind frequently blows, and the neighbouring elevations often occasion rain. The town is defended by a citadel, situated at its north-eastern extremity. The port is below the citadel, and between the town and Barcelonetta. It is chiefly artificial, being formed by piers, solid quays, and the ramparts of the town. The sand which the waves and tides bring into the port is removed at considerable trouble and expense. The town is divided into two unequal parts by a promenade, ornamented with rows of trees. The new town is the smallest, and contains the best houses. The streets are narrow, crooked, and badly paved in the old town. The best houses are of simple and rather pleasing appearance, from four to five stories high, and have large windows and balconies. Many of the houses are adorned externally with paintings in fresco. The public edifices are the cathedral, churches, convents, the palace in which the ancient Cortes held their sittings,—that in which the Counts of Barcelona resided, the custom-house, exchange, theatre, &c. The cathedral was begun in the thirteenth century, but is not yet completely finished. There are about thirty fountains in Barcelona, in the various squares and public places. The town possesses several colleges, three public libraries, a school for the deaf and dumb, an academy of arts and sciences and one of belles lettres, and a botanic garden.

Barcelonetta is a suburb of Barcelona, and is inhabited chiefly by sailors.

The environs of Barcelona are highly beautiful. Though the Catalonians are distinguished for their habits of economy, yet their passion for a country residence is the one which they are least capable of opposing; and there is no city in Europe of an equal size which possesses so many country-houses in its neighbourhood. It is not the richer class who alone enjoy the advantages and pleasures of the country; these residences, ornamented according to the taste and circumstances of each of their occupiers, form a most agreeable diversity in the prospects around the town, especially when the town itself and an extensive view of the sea are included, as they may be from certain places. In a fine day, the eye may wander with delight over this agreeably-varied landscape

EXTRAORDINARY NARRATIVE OF THE ESCAPE OF SOME MISSIONARIES ON THE COAST OF LABRADOR.

THE following narrative is from the periodical account of the Moravian Missions:—

Brother Samuel Liebisch (now a member of the Elders' Conference of the Unity), being at that time intrusted with the general care of the brethren's missions on the coast of Labrador, the duties of his office required a visit to Okkak, the most northern of our settlements, and about 150 English miles distant from Nain, the place where he resided. Brother William Turner being appointed to accompany him, they left Nain on March the 11th, 1782, early in the morning,

with very clear weather, the stars shining with uncommon lustre. The sledge was driven by the baptized Esquimaux, Mark, and another sledge with Esquimaux joined company. The two sledges contained five men, one woman, and a child. All were in good spirits, and, appearances being much in their favour, they hoped to reach Okkak in safety in two or three days. The track over the frozen sea was in the best possible order, and they went with ease at the rate of six or seven miles an hour. After they had passed the islands in the bay of Nain, they kept at a considerable distance from the coast, both to gain the smoothest part of the ice and to weather the high rocky promontory of Kiglapeit. About eight o'clock they met a sledge with Esquimaux turning in from the sea. After the usual salutation, the Esquimaux, alighting, held some conversation, as is their general practice, the result of which was, that some hints were thrown out by the strange Esquimaux that it might be better to return. However, as the missionaries saw no reason whatever for it, and only suspected that the Esquimaux wished to enjoy the company of their friends a little longer, they proceeded. After some time, their own Esquimaux hinted that there was a ground swell under the ice. It was then hardly perceptible, except on lying down and applying the ear close to the ice, when a hollow disagreeably grating and roaring noise was heard, as if ascending from the abyss. The weather remained clear, except towards the east, where a bank of light clouds appeared, interspersed with some dark streaks. But the wind being strong from the north-west, nothing less than a sudden change of weather was expected. The sun had now reached its height, and there was little or no alteration in the appearance of the sky; but the motion of the sea under the ice had grown more perceptible, so as rather to alarm the travellers, and they began to think it prudent to keep closer to the shore. The ice had cracks and large fissures in many places, some of which formed chasms of one or two feet wide; but as they are not uncommon, even in its best state, and the dogs easily leap over them, the sledge following without danger, they are only terrible to new-comers.

As soon as the sun declined towards the west, the wind increased and rose to a storm, the bank of clouds from the east began to ascend, and the dark streaks to put themselves in motion against the wind. The snow was violently driven about by partial whirlwinds, both on the ice and from off the peaks of the high mountains, and filled the air. At the same time the groundswell had increased so much, that its effect upon the ice became very extraordinary and alarming. The sledges, instead of gliding along smoothly on an even surface, sometimes ran with violence after the dogs, and shortly after seemed with difficulty to ascend the rising hill; for the elasticity of so vast a body of ice, of many leagues square, supported by a troubled sea, though in some places three or four yards in thickness, would, in some degree, occasion an undulatory motion not unlike that of a sheet of paper accommodating itself to the surface of a rippling stream. Noises were now likewise distinctly heard in many directions, like the report of cannon, owing to the bursting of the ice at some distance.

The Esquimaux, therefore, drove with all haste towards the shore, intending to take up their night-quarters on the south side of the Nivak. But as it plainly appeared that the ice would break and disperse in the open sea, Mark advised to push forward to the north of the Nivak, from whence he hoped the track to Okkak might still remain entire. To this proposal the company agreed; but when the sledges approached the coast, the prospect before them was truly terrific. The ice, having broken loose from the rocks, was forced up and down, grinding and breaking into a thousand

pieces against the precipices, with a tremendous noise, which, added to the raging of the wind, and the snow driving about in the air, deprived the travellers almost of the power of hearing and seeing anything distinctly.

To make the land, at any risk, was now the only hope left; but it was with the utmost difficulty the frightened dogs could be forced forward, the whole body of ice sinking frequently below the surface of the rocks, then rising above it. As the only moment to land was that when it gained the level of the coast, the attempt was extremely nice and hazardous. However, by God's mercy, it succeeded; both sledges gained the shore, and were drawn up the beach with much difficulty.

The travellers had hardly time to reflect with gratitude to God on their safety, when that part of the ice from which they had just now made good their landing burst asunder, and the water, forcing itself from below, covered and precipitated it into the sea. In an instant, as if by a signal given, the whole mass of ice, extending for several miles from the coast, and as far as the eye could reach, began to burst, and be overwhelmed by the immense waves. The sight was tremendous, and awfully grand; the large fields of ice, raising themselves out of the water, striking against each other, and plunging into the deep, with a violence not to be described, and a noise like the discharge of innumerable batteries of heavy guns. The darkness of the night, the roaring of the wind and sea, and the dashing of the waves and ice against the rocks, filled the travellers with sensations of awe and horror, so as almost to deprive them of the power of utterance. They stood overwhelmed with astonishment at their miraculous escape, and even the heathen Esquimaux expressed gratitude to God for their deliverance.

The Esquimaux now began to build a snow-house, about thirty paces from the beach; but, before they had finished their work, the waves reached the place where the sledges were secured, and they were with difficulty saved from being washed into the sea.

Before they entered this habitation, they could not help once more turning to the sea, which was now free from ice, and beheld with horror, mingled with gratitude for their safety, the enormous waves driving furiously before the wind, like huge castles, and approaching the shore, where, with dreadful noise, they dashed against the rocks, foaming and filling the air with the spray. The whole company now got their supper, and, having sung an evening hymn in the Esquimaux language, lay down to rest about ten o'clock.

In this miserable habitation the missionaries remained for seven days, reduced to the utmost misery for want of food. The weather then cleared up—they discovered a new track of ice, and returned in safety to their own homes.

THE CLELAND TESTIMONIAL, GLASGOW.

IN Nos. 224 and 230 of the 'Penny Magazine' an account of the city of Glasgow is given, in which the merits of Dr. Cleland are briefly acknowledged. We now feel considerable pleasure in presenting a view of a building which has been erected by his fellow-citizens, on his retirement from public office, as a testimony of their approbation of his services; and we do this the more readily as the case forms one of an increasing number of exceptions to the general rule that local merit is rarely or never locally appreciated.

During the long period in which Dr. Cleland filled the office of Superintendent of Public Works, many of the finest improvements which have been made in the city of Glasgow were originated and carried into execution. In 1826 the university of his native city con-

ferred on him the degree of Doctor in Laws, and, in doing so, paid him an unusual compliment by remitting the fees.

The meeting at which it was resolved to erect the building which is represented below, was held on the 7th of August, 1834: it was largely attended by the merchants, bankers, manufacturers, and other inhabitants of Glasgow; and the manner in which he was spoken of, and the resolutions which were passed,

must have been very gratifying to Dr. Cleland. At the meeting 2000*l.* were subscribed; the subscriptions were shortly afterwards increased to 4,603*l.* The committee appointed by the meeting resolved that the sum subscribed should be laid out on a productive and ornamental building, to be erected in Buchanan Street,—one of the principal streets of Glasgow,—and that it should be presented to Dr. Cleland, and bear the name of “The Cleland Testimonial.”



[Cleland Testimonial.]

POLITICAL ECONOMY OF OUR ANCESTORS. No. II.

THE second of the curious Dialogues which we have introduced to our readers under this title is commenced by the Husbandman, who pertinaciously holds to his old dogma, that the general rise of prices is all owing to the landlords having, in the first instance, raised their rents. “And I say,” retorts the Knight, with equal obstinacy, “it is long of (that is, by reason of) you husbandmen that we are forced to raise our rents by reason that we must buy so dear all things that we have of you, as corn, cattle, goose, pig, capon, chicken, butter, and eggs. What thing is there of all these but that ye sell it now dearer by the one-half than ye did within these thirty years? Cannot you, neighbour, remember that within these thirty years I could in this town buy the best pig or goose that I could lay my hand on for 4*d.*, which now costeth 12*d.*; a good capon for 3*d.* or 4*d.*, a chicken for 1*d.*, a hen for 2*d.*, which now costeth me double and triple the money. It is like wise in greater ware, as beef and mutton.” “I grant you that,” rejoins the Husbandman; “but I say you and your sort, men of lands, are the first cause hereof, because you raise your lands.” Here, then, we have our two disputants fairly at issue upon the great modern question of whether it is the rise of prices that raises rents, or the rise of rents that raises prices.

To bring the difference between them to a practical test, the Knight meets the Husbandman’s charge that the whole mischief has come from the raising of lands” with the following proposal:—“Well, if ye and your sort will agree thereto, that shall be holpen; undertake that you and your sort will sell all things at the price ye

did thirty years ago, and I doubt not to bring all gentlemen to let unto you their lands at the rent they went at thirty years past.” He also argues, that while the rise of prices has been universal, the rise of rents has probably not extended to half the lands in the kingdom. The lands of which the rent has been raised, he says, are principally those that had belonged to the church, “that never were surveyed to the uttermost before.”

“When the Husbandman had paused awhile,” continues the Dialogue, he said, “If I had the price of everything that I must pay for besides likewise brought down, I could be content; else not.” To a question from the Doctor, “What things be those?” he answers further, “Marry! iron for my plough, harrows, and carts; tar for our sheep, shoes, caps, linen, and woollen cloth for my mainy, [that is, servants, *menials*—we see that farm servants at this time were not only fed but clothed by their master,] which if I should buy, nevertheless, as dear as I do now, and yet sell my wares good cheap, though my rent were thereafter abated, except the other things aforesaid might be abated in price together, I could never live.” On further consideration, however, he adds, that he thinks if the land were brought down, the price of all things would fall with it.

The absurdity of this notion is immediately pointed out by the Doctor. Those, he asks, from whom you buy your tar, flax, &c., how are they to be compelled to let down the prices of their wares? “They be strangers, and not within obedience of our sovereign lady.” And if they cannot be compelled to let down their prices, would it be expedient for us still to sell

our own wares cheap? In that case foreigners would come and obtain a still larger quantity of our commodities than they now do for a certain quantity of their own. It is plain you could not have one rate of selling to the foreigner, and another to your own countrymen.

To make the matter still clearer, the Knight now makes a second offer. "Let my tenants' rent," he says to the Husbandman, "be increased as your payment is increased," that is, as he explains his meaning, as you now sell for thirty groats what you used formerly to sell for twenty, let my rent be increased only in the same proportion, and I shall be content. This proposition the Husbandman rejects at once; "My bargain," he says, "was to pay for my hold but 6*l.* 13*s.* 4*d.* yearly of rent, and I pay that truly; ye can require no more of me."

The Doctor next proposes to consider whether, if the Husbandman were forced to sell his wares cheap, all things would then be well? This notion, he shows, is as visionary as that which has just been disposed of. "Put the case thus," he says, "that this husbandman should be commanded to sell his wheat at 8*d.* the bushel, rye at 6*d.*, barley at 4*d.*, his pig and goose at 4*d.*, his capon at 4*d.*, his hen at 1*d.* ob. (that is, 1½*d.*), his wool at a mark (13*s.* 4*d.*) the todd, &c." All this might be very well in so far as the landlord and tenant only were concerned; "but," he proceeds, "let us go farther; the Husbandman must buy iron, salt, tar, pitch, and suppose he should be also forced to rear up flax on his own, and that prices of cloth, both linen and woollen, and leather were set after the rate. The gentleman must buy wines, spices, silks, armour, glass to glaze his house withal, iron also for tools, weapons, and other instruments necessary; salt, oils, and many other divers things more than I can reckon without sum, whereof they may in no wise want, as iron and salt, for that which is within the realm of both is not half sufficient for the same; oils, tar, pitch, and rosin, whereof we have none at all, and without some other of the said commodities we could live but grossly and barbarously, as without wines, spices, and silks, these must be brought from beyond the seas; shall we buy them as good cheap after the rate?" (that is, shall we be able to purchase these foreign commodities according to the same reduced rate that, according to the supposition, has been established for our own husbandmen?) It is remarkable that in the whole of this argument the farmer appears to be considered as almost the only domestic producer of commodities. The few articles that were produced by the labours of the artisans in towns are scarcely thought worth being taken into account. At this time there were no manufactures in England, and not a great many trades.

It might at first be supposed, the Doctor goes on to argue, that the foreign merchants would be contented to sell their commodities according to the reduced rate, seeing that the smaller amount of money would still go as far as the larger sum formerly would have done, in purchasing the native commodities of the island. For instance, he observes, they now sell a yard of velvet for 20*s.* or 22*s.*, and pay the same price for a todd of wool; would it not be the same thing for them to sell the one and buy the other for a mark?

It is clear in the first place, however, he continues, that they could not be compelled thus to reduce their prices; nor, secondly, would they have any inducement to do so. "I think," he concludes, "they would still sell at the highest as they do now, or bring nothing at all to us." It is to be remembered that these foreigners trade with other countries as well as with us; "and for that purpose coin universally current is most commodious." To understand this observation it is to be remembered, that English money had of late years been

most seriously debased, first by Henry VIII. and afterwards to a still greater extent by Edward VI.; and although it was one of Elizabeth's first cares after she came to the throne to restore the currency to its ancient standard, it appears that our coin had not, even by the time when the present tract was written, recovered in foreign countries from the low estimation to which the pernicious practices of former governments had deservedly reduced it. This being the case, the Doctor contends that foreigners would not of course object to exchange their goods for the same quantity of English produce as before, they certainly would never accept of a less quantity of money in any case in which that medium of exchange had to be employed. "Think ye," he says, "that they would not study to bring to us such wares and stuff as should be best cheap with them, and most dear with us?" And what, he asks the Knight, do you think these are? "Marry!" quoth the latter, "glasses of all sorts, painted cloths and papers, oranges, pippins, cherries, perfumed gloves, and such like trifles." It is agreed, in short, that they would bring to England nothing they could sell elsewhere. The Doctor afterwards adds that they would probably bring also considerable quantities of brass, not in the useful forms of pots, pans, and other such vessels, but "in coin made beyond sea, like in all things to our coin, which they brought over in heaps, and when they see that esteemed here as silver, they bring that for our commodities, for our wools, fells [skins], cheese, butter, cloth, tin, and lead." It is stated in a subsequent passage that there was every reason to believe that there had been constant importations into the realm of such base money fabricated abroad ever since the coinage had begun to be corrupted by the late governments.

The Knight suggests that searchers might be appointed, and punishments devised, with the view of preventing either the coming in of such foreign coin, or the going forth from the realm of victual in exchange for it. This draws from the Doctor the following apt illustration of the vanity of all such attempts by governments to stop up by interdicts and custom-house regulations the natural channels of commerce. "There may be no device imagined so strong," he replies, "but that ye may be deceived in both those points, as well in such coin brought in as in victuals carried forth, for many heads will devise many ways to get anything by, and though we be environed with a good pool (that is, the sea), yet there is too many posterns of it to get out and in, unwares of the master. Whosoever hath but a petty house with any family of his own, and but one gate to go forth and come in at, and the master of the house never so attentive, yet somewhat shall be purloined forth; much more out of such a large realm as this is, having so many ways and posterns to go forth at and come in."

We have extracted the substance of the remarks made under this latter head for the sake of some interesting facts which they notice, and the deduction may be allowed to make out the position laid down by the author. At the same time it is obvious that the conclusion in question might have been arrived at by a much shorter and more direct road. The foreign merchant would not bring his goods to England to sell them for less money than he had been accustomed to receive, for reasons altogether apart from the consideration of the state of the coin. His profits, hitherto, with all the advantages he had derived from the restoration of the coin to its proper standard, had been no more than the fair profits of trade; for if they had been more, competition would have reduced them. He consequently cannot afford to have them diminished, and if he may not have his former prices, he will no longer resort to the country at all.

A KIND AND GENTLE TEMPER.

BY HANNAH MORE.

SINCE trifles make the sum of human things,
 And half our misery from our foibles springs;
 Since life's best joys consist in peace and ease,
 And few can save, or serve, but all can please;
 Oh! let the ungentle spirit learn from hence,
 A small unkindness is a great offence.
 Large bounties to bestow we wish in vain;
 But all may shun the guilt of giving pain.
 To bless mankind with tides of flowing wealth,
 With power to grace them, or to crown with health,
 Our little lot denies; but Heaven decrees
 To all the gift of ministering to ease.
 The gentle offices of patient love,
 Beyond all flattery, and all price above,
 The mild forbearance of another's fault;
 The taunting word suppress'd as soon as thought:
 On these Heaven bade the sweets of life depend,
 And crush'd ill fortune when it made a friend.
 A solitary blessing few can find;
 Our joys with those we love are intertwined:
 And he, whose wakeful tenderness removes
 The obstructing thorn which wounds the friend he loves,
 Smooths not another's rugged path alone,
 But scatters roses to adorn his own.
 Small slights, contempt, neglect unmix'd with hate,
 Make up in number what they want in weight;
 These, and a thousand griefs, minute as these,
 Corrode our comforts, and destroy our peace.

Swiss Husbandry.—The Alpine pasturages are elevated in heights of two, three, or more ranges, according to the season—the herdsmen ascending with their cows and goats, and often with sheep, as the heat increases from early spring to the high temperature of July and August, and then descending as autumn declines into winter. These pastures form the principal source of maintenance and opulence to the inhabitants of the greater part of Switzerland, Savoy, the Voralberg, and the Tyrol. Each pasture elevation has its particular *chalets* for the herdsmen. The butter and cheese afterwards carried down to market are made in these tiny habitations. Below in the valleys, or often in sheltered nooks on the brow of the mountains, are the winter houses for the cattle, which are then fed with the hay gathered by great industry even in spots to which the goats can scarcely resort. * * * The intrepidity of the *mäher* (mower) of the Alps is scarcely less than that of the Chamois hunters. Whether he be gathering grass for the cows, blue melilot to mix with the cheese, or medicinal herbs for the druggist, he starts forth provided with food, kirchwasser, and tobacco; the soles of his shoes fortified with pointed nails, and with hay inside to soften his fall when he leaps from rock to rock; his gaiters unbuttoned below to leave him free at the ancles, and a whetstone stuck under his belt to sharpen the little scythe or sickle carried over his shoulder. He thus ascends to the hollows and crests of rocks on the brows and summits of mountains, and ties the hay he cuts in firm bundles, which he then pitches downwards from the heights. In this perilous way he in summer gains a scanty living. In winter he may be seen suspended by ropes over precipices and gorges, to reach fallen trees, which he contrives to displace and slide downwards for fuel. If he succeeds in saving by these daring pursuits enough to justify his demanding the hand of the maiden he loves, and whose father often has no more fortune than a little chalet, an Alpine pasture, and the milk of three or four cows, which the pretty peasant maid carries to sell in the valley where he has probably first met her, he marries, takes a chalet, and becomes, in his turn, a herdsman, and in time the proprietor of a few cows, and the father of a family.—*My Note Book,* by John Macgregor.

Immoderate Desires.—All immoderations are enemies; as to health, so to peace. He that desires wants as much as he that hath nothing. The drunken man is as thirsty as the sweating traveller. Hence are the studies, cares, fears, jealousies, hopes, griefs, envies, wishes, platforms of achieving, alterations of purposes, and a thousand like; whereof each one is enough to make the life troublesome. One is sick of his neighbour's field, whose misshapen angles disfigure his, and hinder his lordship of entireness: what he hath is not regarded, for the want of what he cannot have. Another

feeds on crusts, to purchase what he must leave, perhaps, to a fool; or, which is not much better, to a prodigal heir. Another, in the extremity of covetous folly, chooses to die an unpitied death; hanging himself for the fall of the market, while the commons laugh at that loss, and in their speeches epitaph upon him as on that pope, "He lived as a wolf, and died as a dog*." One cares not what attendance he dances all hours, on whose stairs he sits, what vices he soothes, what deformities he imitates, what servile offices he doth, in a hope to rise. Another stomachs the covered head and stiff knee of his inferior; angry that other men think him not so good as he thinks himself. Another eats his own heart with envy at the richer furniture, and better estate, or more honour of his neighbour; thinking his own not good because another hath better. Another vexeth himself with a word of disgrace, passed from the mouth of an enemy, which he neither can digest nor cast up; resolving, because another will be his enemy, to be his own. These humours are as manifold as there are men that seem prosperous. For the avoiding of all which ridiculous and yet spiteful inconveniences, the mind must be settled in a persuasion of the worthlessness of these outward things.—*Bishop Hall.*

Magnesian Bread.—A correspondent has sent the following observations on a paragraph in the article on 'Wheaten Bread,' in No. 250 of the 'Penny Magazine,' (p. 75, col. 2). The habitual use of alum must be pernicious, even in very small doses, especially when we consider that the majority of persons in great cities are already suffering from constipation. The magnesia recommended by the eminent chemist alluded to in the paragraph commented on, would be worse still; for if used in the unsparing way he proposes, a hearty bread-eater would swallow his fifty or sixty grains of subcarbonate of magnesia daily, (or, what comes to the same thing, the equivalent quantity of pure magnesia, supposing the carbonic acid to be expelled by baking.) Now this quantity would be amply sufficient as a daily medicinal dose for a patient labouring under acidity of the stomach; what then would become of those who, not having any superfluous acid, yet became consumers of the magnesian bread?—Why, the natural and necessary acid of the stomach being absorbed, their digestion would suffer most severely. Individuals whose digestive powers have been impaired, and who may be said to subsist on stimulants, may look upon lemonade with horror, and use absorbents by the hundredweight; but the happy possessor of a peaceable and contented stomach always likes acids.

Public Instruction.—When the city of Leyden, in common with all the Low Countries, had fought through the bloodiest, and perhaps the noblest struggle for liberty on record, the great and good William of Orange offered her immunity from taxes, that she might recover from her bitter sufferings, and be rewarded for the important services which she had rendered to the sacred cause. Leyden, however, declined the offer, and asked for nothing but the privilege of erecting a university within her walls, as the best reward for more than human endurance and perseverance. This simple fact is a precious gem to the student of history; for if the protection of the arts and sciences reflect great honour upon a monarch, though it be for vanity's sake, the fostering care with which communities or republics watch over the cultivation of knowledge and the other ennobling pursuits of man, sheds a still greater lustre upon themselves. Nowhere, in the whole range of history, does man appear in a more dignified character, than when a republic founds a new seminary of learning, or extends her liberal aid toward the support of a scientific institution, in whose prosperity she takes a just and fruitful pride. It is by the exertion of the people themselves, by the fruits of their own labour, by the free grant of their own means, that these schools for the cultivation of knowledge and the education of their sons are erected. Nothing but their fullest conviction of the happy, purifying, and invigorating effect which the diffusion of sciences and the training of the youthful mind exercise upon society, can induce them to establish or protect these nurseries of civilization. It is a voluntary tribute brought by a whole community to the superiority of letters and sciences to the great universal cause of learning.—*Lieber's Inaugural Address at Carolina College, United States.*

* Boniface VIII.

Cultivation of the Vine.—A communication which we have received from Lieut.-Col. W. H. Sykes, F.R.S., enables us to give some facts not generally known relative to the vine. In the 'Penny Magazine,' No. 253, it was stated that the cultivation of the vine was limited to countries having a mean temperature between 50° and 60° ; but Colonel Sykes says that six species of vines are cultivated profitably in Dakhun (Deccan), East Indies, between the 17° and 19° parallels of latitude, and longitude $73^{\circ} 50'$ and $76^{\circ} 50'$ east of Greenwich, at an elevation above the sea varying from 1500 to 1800 feet; the mean temperature of the year being 77° to 78° ; the mean temperature of the hottest months (April and May) 81° to 85° ; and of the coldest (October and January) 66° to 71° . The six species of grapes cultivated by the natives in Dakhun, to the luxuriant production of which Colonel Sykes' residence in that part of the East Indies enables him to bear testimony from personal observations, are, the Hubshee, or long, black, truncated, fleshy grape; the Fuckree, an oblong, green, musky grape; the Sahibee, an oblong, yellowish-green, fleshy, dry grape; the Ahbee, as its name implies, a large, round, watery grape; the Bedana, as its name implies, a seedless grape, very small and round, like the "rishmish" of the Persian Gulf. Colonel Sykes adds:—"There is also one other species whose name at this moment I do not recollect; but as the whole six species, I hope, are now on their way to this country, I shall be able to supply the omission. The Portugal round, black grape is also met with at Poona, but as it is not looked upon as so valuable as the rest, its cultivation is very limited. The whole of the above grapes are cultivated for the table, the natives not manufacturing wine; but, as they are abundant and cheap, wine no doubt could be made. The Ahbee grapes sell at a rate varying from 4lbs. to 12lbs. for 1s.; the other kinds are very much more expensive."

THE PROTEUS ANGUINUS.

IN the late Sir Humphry Davy's posthumous work, "The Last Days of a Philosopher," a very interesting account is given of a remarkable animal whose existence is connected with the most curious speculations. Found only in one part of the world, Illyria,—and in only one or two spots of that country,—it is conjectured not to be an inhabitant of the surface of our globe, but to be forced up from the depths of a subterranean lake through the crevices of the calcareous rocks with which that region abounds. Without offering an opinion upon this conjecture, we present our readers with a cut of the animal to accompany the vivid description of our great chemist:—

"In the middle of August we pursued our plans of travel. We first visited these romantic lakes Hallsstadt, Aussee and Töplitz See, which collect the melted snows of the higher mountains of Styria, to supply the unfailing sources of the Traun. We visited that elevated region of the Tyrol, which forms the crest of the Pusterthal, and where the same chains of glaciers send down streams to the Drave and the Adige, to the Black Sea and to the Adriatic. We remained for many days in those two magnificent valleys which afford the sources of the Save, where that glorious and abundant river rises as it were in the very bosom of beauty, leaping from its subterranean reservoirs in the snowy mountains of Terglou and Manhardt in thundering cataracts amongst cliffs and woods into the pure and deep cerulean lakes of Wochain and Wurzen, and pursuing its course amidst pastoral meadows so ornamented with plants and trees as to look the garden of Nature. The subsoil or strata of this part of Illyria are entirely calcareous and full of subterranean caverns, so that in every declivity large funnel-shaped cavities, like the craters of volcanos, may be seen, in which the waters that fall from the atmosphere are lost; and almost every lake or river has a subterranean source, and often a subterranean exit. The Laibach river rises twice from the limestone rock, and is twice again swallowed up by the earth before it makes its final appearance and is lost in the Save. The

Zirknitz See or lake is a mass of water entirely filled and emptied by subterraneous sources; and its natural history, though singular, has in it nothing of either prodigy, mystery, or wonder. The grotto of the Madalena at Adelsberg occupied more of our attention than the Zirknitz See. I shall give the conversation that took place in that extraordinary cavern, entire, as well as I can remember it, in the words used by my companions.

Eub.—We must be many hundred feet below the surface; yet the temperature of this cavern is fresh and agreeable.

The Unknown.—This cavern has the mean temperature of the atmosphere, which is the case with all subterraneous cavities removed from the influence of the solar light and heat; and, in so hot a day in August as this, I know no more agreeable or salutary manner of taking a cold bath than in descending to a part of the atmosphere out of the influence of those causes which occasion its elevated temperature.

Eub.—Have you, Sir, been in this country before?

The Unknown.—This is the third summer that I have made it the scene of an annual visit. Independently of the natural beauties found in Illyria, and the various sources of amusement which a traveller fond of natural history may find in this region, it has had a peculiar object of interest for me in the extraordinary animals which are found in the bottom of its subterraneous cavities; I allude to the *Proteus anguinus*. We shall soon be in that part of the grotto where they are found; and I shall willingly communicate the little that I have been able to learn respecting their natural characters and habits.

Eub.—The grotto now becomes really magnificent; I have seen no subterraneous cavity with so many traits of beauty and of grandeur. The irregularity of its surface, the magnitude of the masses broken in pieces which compose its sides, and which seem torn from the bosom of the mountain by some great convulsion of nature, their dark colours and deep shades form a singular contrast with the beauty, uniformity, I may say, order and grace of the white stalactical concretions which hang from the canopy above, and where the light of our torches reflected from the brilliant or transparent calcareous gems create a scene which almost looks like one produced by enchantment.

Phil.—If the awful chasms of dark masses of rock surrounding us appear like the work of demons who might be imagined to have risen from the centre of the earth, the beautiful works of nature above our heads may be compared to a scenic representation of a temple or banquet hall for fairies or genii, such as those fabled in the Arabian romances.

The Unknown.—A poet might certainly place here the palace of the king of the Gnomes, and might find marks of his creative power in the small lake close by, on which the flame of the torch is now falling; for, there it is that I expect to find the extraordinary animals which have been so long the objects of my attention.

Eub.—I see three or four creatures, like slender fish, moving on the mud below the water.

The Unknown.—I see them; they are the *Protei*; now I have them in my fishing net, and now they are safe in the pitcher of water. At first view, you might suppose this animal to be a lizard, but it has the motions of a fish. Its head and the lower part of its body, and its tail, bear a strong resemblance to those of the eel; but it has no fins; and its curious bronchial organs are not like the gills of fishes; they form a singular vascular structure, as you see, almost like a crest, round the throat, which may be removed without occasioning the death of the animal, who is likewise furnished with lungs. With this double apparatus for supplying air

to the blood, it can live either below or above the surface of the water. Its fore-feet resemble hands, but they have only three claws or fingers, and are too feeble to be of use in grasping or supporting the weight of the animal; the hinder-feet have only two claws or toes, and, in the larger specimens, are found so imperfect as to be almost obliterated. It has small points in place of eyes, as if to preserve the analogy of nature. It is of a fleshy whiteness and transparency in its natural state, but when exposed to light, its skin gradually becomes darker, and at last gains an olive tint. Its nasal organs appear large; and it is abundantly furnished with teeth, from which it may be concluded that it is an animal of prey, yet in its confined state, it has never been known to eat, and it has been kept alive for many years by occasionally changing the water in which it was placed.

Eub.—Is this the only place in Carniola where these animals are found?

The Unknown.—They were first discovered here by the late Baron Zöis; but they have since been found, though rarely, at Sittich, about thirty miles distant, thrown up by water from a subterranean cavity; and I have lately heard it reported that some individuals of the same species have been recognised in the calcareous strata in Sicily.

Eub.—This lake, in which we have seen these animals, is a very small one; do you suppose they are bred here?

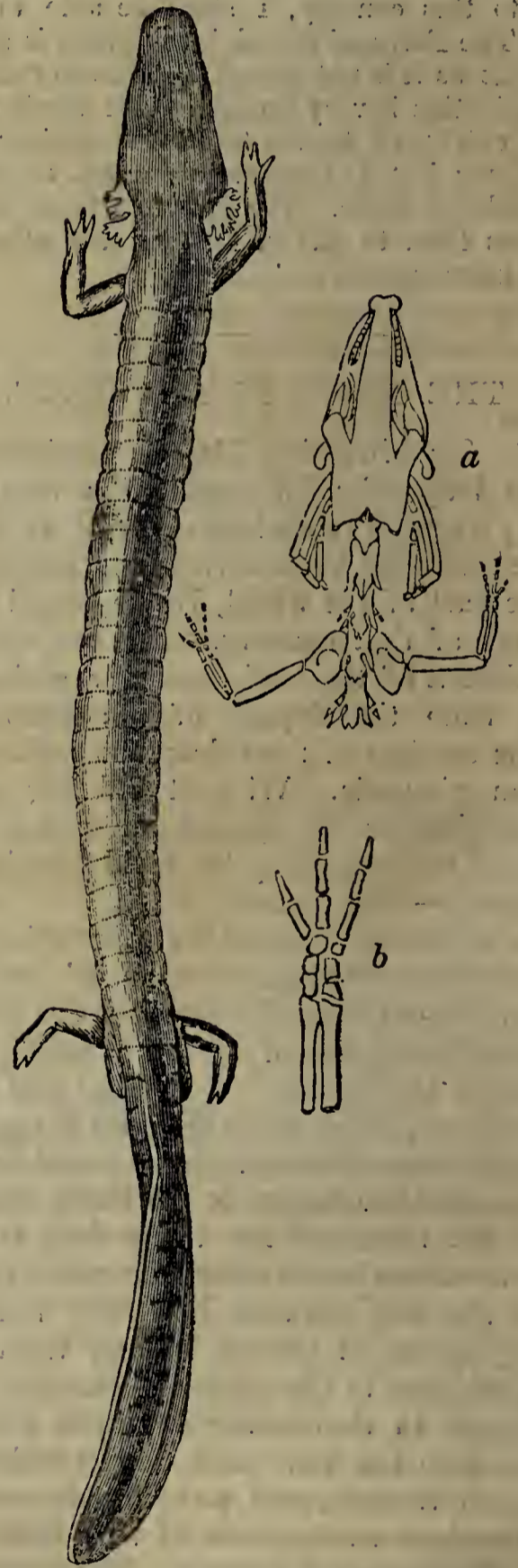
The Unknown.—Certainly not; in dry seasons they are seldom found here, but after great rains they are often abundant. I think it cannot be doubted that their natural residence is in an extensive, deep, subterranean lake, from which, in great floods, they sometimes are forced through the crevices of the rocks into this place where they are found; and it does not appear to me impossible, when the peculiar nature of the country in which we are is considered, that the same great cavity may furnish the individuals which have been found at Adelsberg and at Sittich.

Eub.—This is a very extraordinary view of the subject. Is it not possible that it may be the larva of some large unknown animal inhabiting these limestone cavities? Its feet are not in harmony with the rest of its organization, and were they removed, it would have all the characters of a fish.

The Unknown.—I cannot suppose that they are larvæ. There is I believe in nature no instance of a transition by this species of metamorphosis, from a more perfect to a less perfect animal. The tadpole has a resemblance to a fish before it becomes a frog; the caterpillar and the maggot gain not only more perfect powers of motion on the earth in their new state, but acquire organs by which they inhabit a new element. This animal, I dare say, is much larger than we now see it, when mature in its native place; but its comparative anatomy is exceedingly hostile to the idea that it is an animal in a state of transition. It has been found of various sizes, from that of the thickness of a quill to that of the thumb, but its form of organs has been always the same. It is surely a perfect animal of a peculiar species. And it adds one instance more to the number already known of the wonderful manner in which life is produced and perpetuated in every part of our globe, even in places which seem the least suited to organised existences. And the same infinite power and wisdom which has fitted the camel and the ostrich for the deserts of Africa, the swallow that secretes its own nest for the caves of Java, the whale for the Polar seas, and the morse and white bear for the Arctic ice, has given the Proteus to the deep and dark subterranean lakes of Illyria,—an animal to whom the presence of light is not essential, and who can live indifferently in air and in water, on the surface of the rock, or in the depths of the mud.

Phil.—It is now ten years since I first visited this

spot. I was exceedingly anxious to see the Proteus, and came here with the guide in the evening of the day I arrived at Adelsberg; but though we examined the bottom of the cave with the greatest care, we could find no specimens. We returned the next morning and were more fortunate, for we discovered five close to the bank, on the mud covering the bottom of the lake; the mud was smooth and perfectly undisturbed, and the water quite clear. This fact of their appearance during the night, seemed to me so extraordinary, that I could hardly avoid the fancy that they were new creations. I saw no cavities through which they could have entered, and the undisturbed state of the lake seemed to give weight to my notion. My reveries became discursive, I was carried in imagination back to the primitive state of the globe, when the great animals of the sauri kind were created under the pressure of a heavy atmosphere; and my notion on this subject was not destroyed, when I heard from a celebrated anatomist, to whom I sent the specimens I had collected, that the organization of the spine of the Proteus was analogous to that of one of the sauri, the remains of which are found in the older secondary strata."



[*Proteus anguinus*, half the natural size; *a*, Skull cervical vertebrae, and bones of anterior extremity, half the natural size; *b*, bones of fore foot, natural size.]

* * The Office of the Society for the Diffusion of Useful Knowledge is at 59, Lincoln's Inn Fields.

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DECKING GRAVES—ORNAMENTAL CEMETERIES.



[Church-yard at Wirfin, Valley of Salza.]

ALL nations at different periods seem to have delighted to deck the graves of their departed relatives with garlands of flowers—emblems at once of beauty and quick fading into death. The Greeks crowned the dead with flowers, and the mourners wore them at the funeral ceremonies. In the 'Flora Domestica' it is remarked that the Romans observed the first-mentioned of these practices so religiously, that it was often alluded to in a codicil to their wills, as appears by an old inscription at Ravenna and another at Milan, in which roses are ordered to be yearly strewed and planted upon the graves of the testators. It should be mentioned that the Romans did not generally bury their dead before the time of the Antonines. The bodies of the dead were burnt, and the ashes placed in an urn. Gough, in his 'Sepulchral Antiquities,' says that the flowers strewed over graves by the Greeks were the amaranth and polyanthus. The practice was reprobated by the primitive Christians; but in Prudentius's time they

had adopted it, and it is expressly mentioned both by St. Ambrose and St. Jerome. The ancients planted the asphodel around the tombs of the deceased, in the belief that the seeds of this plant afforded nourishment to the dead. In Persia the basil adorns tombs and graves. At Tripoli the tombs are garlanded with festoons of the Arabian jessamine, with roses, and the flowers of the orange and myrtle. In Italy the periwinkle, called by the peasantry *fior di morto*, or death's flower, is used to deck their children who die in infancy. In Germany and in the German Cantons of Switzerland the custom of decking graves is very common. At Leipzig shrubs and flowers are cultivated in little inclosures round the graves, and the burial-ground is a public walk resorted to by those who have relatives interred within its precincts. In the beautiful little churchyard at Schwytz, almost every grave is entirely covered with pinks; but amongst the many beautiful spots appropriated to burial-grounds in Germany and

in Switzerland, there is none where so much care is bestowed in ornamenting graves as in the churchyard of Wirfin, in the valley of the Salza. The usual fashion in Germany and in Switzerland is to have the ornaments of wood or iron wrought in arabesque forms. At Wirfin, a view of which is given in the cut, the graves are covered with little oblong boxes, which are either planted with perennial shrubs, or renewed with annual flowers; and in addition some graves are daily strewed over with freshly-gathered flowers, and others are so on fête-days. Pendent from the ornaments of most of the recent graves are also little vases filled with water, in which the flowers are preserved fresh. Children are seen thus decking out the grave of a lost mother, and mothers wreathing garlands to hang on the grave of a child. Again, servants thus show their gratitude and regret for the loss of some kind master or mistress. A tourist who recently visited the little village of Wirfin says, that on going into the churchyard at an early hour, he found six or seven persons employed in these gentle offices. He informs us that the graves most recently tenanted were not alone the objects of this affectionate tribute, but that some which had received their occupant twenty years before were covered with fresh nosegays.

The cemetery of Père la Chaise, a description of which will be found in the 'Penny Magazine,' No. 146, exhibits proofs of the extent to which the custom of decking graves is preserved even by a metropolitan population, and among persons of some rank. In the neighbourhood of this cemetery there are shops filled with garlands of *immortelles*, which are purchased on fête-days and anniversaries, and placed on the graves. The flower of which these garlands are composed is the one known by the name of Everlasting, the yellow flowers of which, if gathered before their maturity, will preserve their colour and appearance for a great length of time. The custom of throwing garlands over the grave has, in the absence of a free press, been made an occasion for the display of political feelings. The monument of young Lallemand, a law student, who was killed in 1820 by a private of the royal guards, during a popular tumult, was placed in Père la Chaise, at the expense of the students of the Schools of Law, Medicine, the Fine Arts, and Commerce, who, upon the anniversary of his death, made a point of repairing in a body to strew *immortelles* on his grave, until the government refused them admission to the ground on the third anniversary. A few weeks ago, two young persons from the provinces, brother and sister, were arrested by the police of Paris in the act of throwing garlands on the graves of Morey and Pepin, who were recently executed with their accomplice the assassin Fieschi. Suetonius affords a parallel to an act of such moral perversion as the above, which is happily a solitary example. After dwelling upon the detestable character of Nero, the historian says that there were not wanting persons who, for a long time after his death, strewed flowers on his tomb each spring and summer. How strong the contrast of the feelings which prompt to acts like these, and the tenderness of sentiment which characterized the old custom of carrying garlands before the bier of youthful beauty, which were afterwards strewed over her grave! In 'Hamlet,' the Queen scattering flowers says,—

"Sweets to the sweet. Farewell!
I hoped thy bride-bed to have decked, sweet maid,
And not have strewed thy grave."

Aubrey notices a custom at Oakley, in Surrey, of planting roses on the graves of lovers. A similar practice is noticed nearer our own time by Gay, who says,—

"Upon her grave the rosemary they threw,
The daisy, butter-flower, and endive blue."

Rosemary was considered as an emblem of faithful remembrance. Thus Ophelia says,—“There's rosemary for you, that's for remembrance; pray you, love, remember.” Martyn, in his edition of Miller's Gardener's Dictionary, published about the middle of last century, says, that in his time “it was still customary in some parts of England to distribute rosemary among the company at a funeral, who frequently threw sprigs of it into the grave.” Wordsworth introduces in one of his smaller poems an allusion to a practice which still prevails in the north of England:—

“The basin of box-wood, just six months before,
Had stood on the table at Timothy's door;
A coffin through Timothy's threshold had passed,
One child did it bear, and that child was his last.”

It is stated in a note that—“In several parts of the north of England, when a funeral takes place, a basin full of sprigs of box-wood is placed at the door of the house from which the coffin is taken up; and each person who attends the funeral ordinarily takes a sprig of this box-wood, and throws it into the grave of the deceased.” Pepys, in his 'Memoirs,' vol. i. p. 139, mentions a churchyard near Southampton, where, in the year 1662, the graves “were accustomed to be all sowed with sage.”

In South Wales the custom of planting and ornamenting graves is noticed by Brand in his 'Popular Antiquities,' as being very common. He says,—

“It is a very ancient and general practice in Glamorgan to plant flowers on the graves, so that many churchyards have something like the splendour of a rich and various parterre. Besides this, it is usual to strew the graves with flowers and evergreens (within the church as well as out of it) thrice at least every year, on the same principle of delicate respect as the stones are whitened. No flowers or evergreens are permitted to be planted on graves but such as are sweet-scented: the pink and polyanthus, sweet williams, gilliflowers and carnations, mignonette, thyme, hyssop, camomile and rosemary, make up the pious decoration of this consecrated garden. Turnesoles, peonies, the African marygold, the anemony, and many others I could mention, though beautiful, are never planted on graves, because they are not sweet-scented. It is to be observed, however, that this tender custom is sometimes converted into an instrument of satire; so that where persons have been distinguished for their pride, vanity, or any other unpopular quality, the neighbours whom they may have offended plant these also by stealth upon their graves. The white rose is always planted on a virgin's tomb. The red rose is appropriated to the grave of any person distinguished for goodness, and especially benevolence of character. In the Easter week, most generally, the graves are newly dressed, and manured with fresh earth, when such flowers or evergreens as may be wanted or wished for are planted. In the Whitsuntide holidays, or rather the preceding week, the graves are again looked after, weeded, and otherwise dressed, or, if necessary, planted again. It is a very common saying of such persons as employ themselves in thus planting and dressing the graves of their friends, that they are cultivating their own freeholds. This work the nearest relations of the deceased always do with their own hands, and never by servants, or hired persons. Should a neighbour assist, he or she never takes,—never expects,—and, indeed, is never insulted by the offer of any reward, by those who are acquainted with the ancient customs. The vulgar and illiberal prejudice against old maids and old bachelors subsists among the Welsh in a very disgraceful degree, so that their graves have not unfrequently been planted, by some satirical neighbours, not only with rue, but with thistles, nettles, henbane, and other noxious weeds.”

“None ever molest the flowers that grow on graves;

for it is deemed a kind of sacrilege to do so. A relation or friend will occasionally take a pink, if it can be spared, or a sprig of thyme, from the grave of a beloved or respected person, to wear it in remembrance; but they never take much, lest they should deface the growth on the grave. This custom prevails principally in the most retired villages."

At Penshurst, in Kent, there are two graves in which are buried the remains of two young ladies, whose parents have planted them with roses, clematis and cypress, which are carefully trained, so that the graves are almost constantly surrounded by floral emblems of those who repose below.

While in allusion to the practices we have noticed, we may exclaim with Shenstone—"Oh customs meet and well!" we cannot allow ourselves to be dissatisfied with the age in which we live, because these and similar pleasing observances are not directly encouraged by some of its tendencies. For the future we have the best hopes, and entirely coincide in the view taken by an eminent writer, both by his learning and qualities, who observes, "that while the advance of civilization destroys much that is noble, and throws over the mass of human society an atmosphere somewhat dull and hard; yet it is only by its peculiar trials, no less than by its positive advantages, that the utmost virtue of human nature can be matured. And those who vainly lament that progress of earthly things which, whether for good or evil, is certainly inevitable, may be consoled by the thought that its sure tendency is to confirm and purify the virtue of the good."

Though the practice of decking graves is declining, we may notice that the feelings of propriety and respect on which it was founded are improved. In proof of this we may instance the establishment of public cemeteries, on a large and appropriate scale, near the metropolis, at Liverpool, Birmingham, Leeds, Sheffield, and other large towns. We are acquainted with a populous town in which a few years ago the crowded parish churchyard was not only a constant thoroughfare by night as well as by day, but was likewise more frequented than any other place as a play-ground. It was also crowded to an improper extent with graves. A sense of public propriety has required that, as a burial-ground was not intended to be a great thoroughfare, it should no longer be used as such, and also that it should no longer be the resort of half the boys in the parish, as the most fitting scene for their games and noisy contentions. At the same time a public cemetery has been established for the reception of those for whom a proper resting-place could no longer be reckoned upon in the old churchyard. In another town, of which we have some knowledge, the statutes for the yearly hiring of servants had been held for years in the churchyard; but the custom being no longer in accordance with the higher tone of public feeling which generally exists, a more suitable place has in consequence been selected, in which the sellers and buyers of labour and services may make their bargains.

ENGLISH AND AMERICAN NEWSPAPERS.

(From a Pamphlet entitled 'The Newspaper Stamp and the Duty upon Paper, viewed in relation to their effects upon the Diffusion of Knowledge.')

THE legal newspaper trade of the United Kingdom is exceedingly small. The total number of newspapers published is 356; the total number of stamps supplied is about 36,000,000. This number is, indeed, nearly double that of the stamps issued at the beginning of the present century, but it has unquestionably not kept pace with the desire for knowledge amongst the mass

of the people, and has not advanced in a ratio very far beyond the increase of population. In the United States of America, on the contrary, there were, in 1834, 1265 distinct newspapers, having an aggregate circulation estimated at about 75,000,000 annually. The American newspapers, as is well known, have no stamp, and are circulated through the States at a very small rate of postage. The population of the United Kingdom being 24,000,000, and the newspaper stamps issued being 36,000,000, we have a newspaper and a half annually to each of the population. The population of the United States being 13,000,000, and the newspapers issued being about 75,000,000, we have six newspapers annually to each of the population.

But there is a circumstance in the comparison of the newspaper circulation of the United Kingdom and of the United States, which, we apprehend, has not been sufficiently regarded. It has been made a matter of reproach to us, and alleged as a proof of the injurious effects of the newspaper stamp, that whilst America possesses 1265 distinct newspapers,—that is, about one distinct newspaper for every 10,000 of the population, the United Kingdom possesses only 356 newspapers,—that is, one distinct newspaper for every 70,000 of the population*. There is, however, another point of view in which this difference is to be regarded. Of the 356 newspapers of the United Kingdom, a total of 36,000,000 of copies are annually circulated, which gives a circulation to each paper of 100,000 annually. Of the 1265 papers of the United States, about 75,000,000 are annually circulated, which gives a circulation to each paper of less than 60,000 annually. The average circulation, then, of an American newspaper, is not quite six to ten, compared with the circulation of an English newspaper. If these 75,000,000 American papers were all weekly, we should see that there was an issue of 1134 papers upon each publication of each separate paper. But ninety of the American newspapers are daily; and these, without doubt, have the larger circulation. Assuming a circulation only of 1500 for each daily unstamped paper in the United States, their ninety daily papers would consume 42,000,000 of sheets of paper out of the 75,000,000; and the remainder would show a circulation of about 540 copies each for the remaining 1175 papers. The English newspapers (we mean of course the stamped) have with a few striking exceptions in London, and still fewer in the country, an average circulation under 1000 of each number. The returns of stamps supplied to our provincial papers show 800. We shall be able, by another process, to arrive at the same conclusions with regard to the sale of the American papers. There is no doubt that the average sale, with all the advantages of low price, is less than our own, of separate papers in the United States.

This is a state of things which, in our view, would be destructive of the chief value of newspapers in this country, were such to be the result of the abolition of the stamp. Were the numbers of separate papers published to increase largely, without a proportionate increase in the quantities of each paper printed, they could not be published at a commercial advantage, except upon a very small scale, adapted to petty local interests. Such an increase of the mere number of distinct newspapers published would divest them of their national and district character, and change them into vehicles for parish politics and village scandal. The subject is an important one, and we must examine it somewhat in detail.

The number of separate newspapers in the United

* The proportion is somewhat different in Great Britain. England and Scotland have 276 newspapers in a population of 16,000,000, or one distinct newspaper for every 58,000 of the population.

States, (1265,) as compared with the population, (13,000,000,) gives one distinct newspaper for every 10,000 of the population. If every adult male, therefore, bought a newspaper, the average circulation of each distinct paper would not much exceed 2000. But, however strong may be the desire of political knowledge, and however cheaply that knowledge may be supplied, it is not at all probable that a newspaper is bought by one adult male in three. This we take to be about the average circulation of each distinct paper in the United States; that is, an issue of each, daily, semi-weekly, and weekly, of about 700. But in the densely-populated States the proportions are even less. Massachusetts has 108 papers for 610,000 inhabitants, which is one paper for every 5700; New York has 267 papers for 2,000,000 inhabitants, which is one paper for every 7500; Pennsylvania has 220 papers for 1,400,000 inhabitants, which is one paper for every 6400; Ohio has 140 papers for 94,000 inhabitants, which is one paper for every 6800. Taking an average in Massachusetts, New York, Pennsylvania, and Ohio, there is one paper for every 6600 inhabitants. Upon the calculation, therefore, that one adult male in three buys a newspaper, the circulation of each number of each paper in these States would not exceed 550. This species of circulation is, no doubt, well suited to the necessities and desires of the people of the United States, or it would not exist, unshackled as it is by any tax or Government regulation. There can be no doubt that with a few exceptions in the large commercial towns, the newspaper circulation of the United States is essentially local. To establish a newspaper in the United States is almost as easy an operation as to raise a log hut. As soon as a settlement is formed, the store, the tavern, the chapel, and the newspaper spring up as a matter of course. The newspaper may be carried 100 miles by the post for a cent (about a halfpenny), and yet be as strictly local, owing to the sparse population, as the newspaper that is carried from Manchester to Oldham. This character of the newspaper press of the United States is precisely what is called for in a new settlement. It is satisfactory to those who are clearing lands, and cutting roads, and rearing towns, and digging canals, and surrounding themselves as fast as they can with all the appliances of civilization, to see their interests represented, their labours recorded, and their contests or agreements made matter of importance in a weekly print. The legislative and judicial proceedings of their own State, of course form part of the record, and are next in importance. Then come the proceedings of Congress, and then European politics, and arts, and literature. As the little town grows, fresh newspapers spring up; and two newspapers, like two attorneys in a town, often thrive better than one. A newspaper that has it all its own way is a dull affair. But it is a long time before the newspaper of a young American settlement becomes of the importance of even an English provincial newspaper. This either represents the stirring interests of a large town, which interests are connected with every pulsation of the heart of the empire, or spreads over some large agricultural district connected in its parts by all the various ties and associations which arise out of the habits that proceed from Englishmen managing their own affairs in concert. The character of the English press is not essentially local. Of the 171 papers of England published out of London, of the forty-two published in Scotland, and of the eighty published in Ireland, there is not one that does not, more or less, feel it necessary to make business arrangements, and employ considerable mental activity, for the purpose of keeping pace with the general news of the empire. It is this character which, perhaps more than anything else, has neutralized whatever is evil,

and given double effect to whatever is good, in the newspaper press of England. This state of our press has been created by the free circulation of newspapers by the post, and by the opportunities which that free circulation has afforded of comparing one newspaper with another, and thus of holding the narrow elements of local interests, and local passions, and local prejudices in subjection to, or in concert with, the larger elements of national principles and feelings. Local interests, no doubt, claim a prominent share of the attention of newspaper conductors, and it is of the utmost importance that whatever is corrupt should be held in check, and whatever is honest and beneficial should be cherished and supported by complete local publicity. The British provincial newspapers do their duty in this respect, as it appears to us, for the most part, vigilantly and fearlessly. They are enabled to do so by the independent position which a very large proportion of them commercially hold.

THE IBEX.

THIS animal was classed, by Buffon and the naturalists of his day, with the antelope, but the antelope is now regarded as belonging to a distinct genus, between the goat and the deer. The ibex is one of the most interesting species of the goat genus, of which there are not more than two or three varieties. It is considerably larger than the common goat, and possessed of greater vigour and activity. Its head is small and compressed, and its large eyes being sparkling and expressive, it has an animated and lively appearance. Its hair is reddish-brown in summer and grey in winter; beard short and of a dark brown; the hoofs are very small and the tail short. The male only is distinguished by a beard. The horns measure from two to three feet in length, and weigh from eight to ten pounds; but they occasionally attain a prodigious growth, and reach nearly to the tail. The dimensions of the female are smaller than the male. The kids are of an ash-coloured grey, and only one is usually brought forth at a birth.

The Germans give the name of steinbock to the ibex, the literal meaning of which is "buck of the rock." The word is indeed expressive of the strongest characteristic of the animal, for the ibex is never found in plain countries. The Alps, the Apennines, the Pyrenees, and the mountains of the Tyrol, are its native and favourite haunts in Europe; and in Asia it is found in the chain of mountains which extends from Taurus, between Eastern Tartary and Siberia: it is common in the island of Crete. Its home is in places inaccessible to most other animals, and which furnish only the scantiest means of subsistence; and, like mountain-dwellers in general, it is satisfied with frugal fare, and its habits are wild and independent. During the night the ibex descends to pasture in the woods, but at sunrise it again seeks the mountain summits, and assembles in flocks of from ten to fifteen individuals. It is said that the old males generally seek more elevated spots than the females and younger males. The only sound which the animal makes is a short whistle, and, when irritated, a snorting noise.

The perils which attend the chase of the chamois have been described in No. 146 of the 'Penny Magazine.' The pursuit of the ibex demands a spirit not less adventurous. The fore-legs of the animal being shorter than the hinder ones, it invariably, when pursued, ascends to places the most difficult of access. All the address and courage of the hunters are needed in traversing the mountain passes, and strength and agility of body are as requisite as stoutness of heart in encountering the dangers of the chase. Dogs, which are trained to follow the ibex to the loftiest crags and

precipices frequently become victims of their ardour in pursuing the game, as they have not the sure-footedness for which it is remarkable. The ibex is not only strong and agile, but possesses, to an extraordinary degree, the power of ascending rocks which are almost perpendicular, owing to the facility with which, like the chamois, it can unerringly throw itself on the centre of gravity. Two or three bounds, in which it seems scarcely to touch the almost perpendicular rock, enable the animal to make an ascent of many feet. In Swit-

zerland and the Tyrol the ibex is frequently shot with the rifle. The hunters are excellent marksmen, but the animal can only be approached in the most stealthy manner. The flesh is said to be held in considerable esteem, but the difference in point of flavour between a kid and an older individual is considerably in favour of the former. The fleece and skin are used for various purposes. In the old 'Materia Medica' the blood of the ibex was considered a remedy in cases of pleurisy and some other complaints



[The Ibex.]

SOUTH STAFFORDSHIRE MINING-DISTRICT.

WE have several times given short notices of this productive portion of the kingdom;—but we have pleasure in publishing the following more detailed description, which has been furnished to us by an intelligent correspondent (a native of Wolverhampton) from his own personal knowledge:—

In passing through Birmingham the traveller immediately enters Staffordshire, and comes at once into the coal and iron district, which stretches north to Wolverhampton,—west to Dudley, Halesowen, and beyond Stourbridge, in the counties of Worcester and a detached part of Shropshire,—and north-east to Walsall, Bloxwich, and nearly to Cannock. It includes many very populous market-towns, townships, and parishes, extending over a surface (as nearly as I can form an estimate) of from 80 to 100 square miles, and including a population of probably not less than 200,000 souls, nearly the whole of whom are engaged in mining or manufacturing pursuits. Being nearly in the centre of the kingdom, the situation is naturally high, and the air on the more elevated parts sharp. Several small streams have their sources, near to each other, in this

district, some of which flow westerly into the Severn and others easterly into the Trent. The district is considered healthy. The soil is generally a rich sandy loam, except on the summits of the hills; and it produces good crops of wheat, oats, grass, &c. Even amidst the smoke of the collieries, good crops of wheat may be seen growing on the unbroken lands, and also on those that have been broken up, worked out, and reclaimed. Of fruit there is not much grown, but many of the colliers and workmen have their little gardens, and some of them assiduously cultivate the gooseberry and currant, in the size of which former fruit they take a pride, and have prize-shows. Of course, the immense quantities of refuse brought up from the mines, and thrown on the surface, together with the cinders from the smelting or blast-furnaces, added to the inequalities of the coal-fields, present those barren appearances described in your Supplement for January last; but these cinders, &c., make excellent roads, and are extensively used for that purpose. Yet but for these causes, together with the smoke, noises, and blazing fires (particularly by night), the whole

district is naturally pleasant, and in many parts extremely picturesque. Who has not heard of the beauties of Hagley,—the Leasowes,—the neighbourhood of Himley, &c., all of which are within or on the borders of the mining districts?

Numerous canals (there are no navigable streams in the immediate vicinity by reason of its elevation), some of them works of astonishing magnitude and cost, intersect the whole district, and convey its productions to the ports of London, Liverpool, Bristol, Hull, and thence to the remotest parts of the habitable world; and by the same means the adjacent counties, for fifty miles round, or more, are supplied with coals, &c., from this quarter. The town of Bilston, so long celebrated for its coal, is not less than a mile and a half long,—contains two churches, many large dissenting chapels, and a population of 12,000 souls. Beside the vast quantities of coal, iron-ore, cast and wrought iron, exported, many very extensive manufactories are carried on in this district from the cheapness of fuel, &c. The Soho Works you have already described. Wolverhampton, the largest town in this district and in the county, is celebrated for its manufactories of locks of every description, bolts, hinges, screws, various other articles in iron-work, brass-foundery, tin and japanned goods. It contains but one parish, which is very extensive;—one large ancient collegiate church, St. Peter's, with a deanery, connected with the deanery of Windsor;—three other modern-built churches;—six or eight dissenting chapels;—one large Catholic chapel, at which the late Catholic bishop, Dr. Milner, used to preside;—a subscription library and reading-room, a large prison, or bridewell, with a population of about 40,000. Wolverhampton, with Bilston, Sedgley, and Willenhall, constitutes one borough, and returns two members to parliament. The population of these four places in 1831 was 67,000. Dudley, with a population of above 20,000, is situate in an isolated part of Worcestershire, within the county of Stafford, manufactures nails, chains, anvils, vices, spades, fenders, &c. It has two large churches, besides chapels. Its old castle, situate on a limestone rock, close to the town, is an interesting object, belonging to the noble family of Dudley and Ward. Dudley now returns one member to parliament. Walsall, a borough-town with about 15,000 inhabitants, is noted for saddlery-goods, spurs, bridle-bits, stirrups, &c. The church is on a hill, at the top of the High Street, and is approached from thence by a long flight of steps, the ascent to which has given rise to the popular jest that the Walsall people may be known by being all "knock-kneed." Walsall returns one member to parliament. Wednesbury has about 8000 inhabitants; its manufactures are gun-locks, gun-barrels, iron tube for gas, coach-springs and iron-work, screws, &c. The church is on an eminence, to the right of the mail-road. In this town I have known houses sink into the earth by being undermined by the coal-pits. Not many years ago, an inn in the centre of the town fell in from this cause; and many houses in this place may still be seen nodding to each other, fearfully out of their perpendicular. Stourbridge, within the confines of Worcestershire, is a neat, respectable town, with about 8000 inhabitants,—has manufactories of nails, glass, and coarse pottery-ware. Hagley, the seat of Lord Lyttelton, is about two miles from here; its beauties are enrolled in Thompson's 'Seasons.' Halesowen abounds with nailors and chain-makers; the Leasowes, once the residence of the poet Shenstone, adjoins the town. Sedgley, an extensive parish between Wolverhampton and Dudley, with a population of 18,000 or 20,000, is noted for its immense limestone rocks, lime and iron-works, &c. West Bromwich and Tipton, two populous parishes between Birmingham and Dudley, abound with coal-works, iron-forges, gas-

works, founderies, &c., for cast-iron cylinders, pipes, hollow kitchen-furniture, and iron steam-boilers: iron vessels, of seventy tons burden, have been built at Tipton. In this parish, at the Moate Colliery, occurs the ten-yard coal, in one uninterrupted stratum. West Bromwich has a population of 12,000, rapidly increasing. The brick chimneys of its steam-engines, tapering, with a mathematical nicety, to a height rivaling the London Monument, engage the traveller's attention. A new church here is built in the florid Gothic style; a new Gothic Catholic chapel has also been lately built. To show the extent of religious emulation in this parish, it is merely sufficient to state that, in addition to the numerous large dissenting chapels already erected, another has been just finished, upon a larger scale, at a great cost, to defray the expense of which 700*l.* were collected at the chapel-doors, on three Sundays only, in addition to numerous large public and private subscriptions. Land in this parish, which in my recollection was an open common, is now covered with handsome houses and streets, and is selling for more than the rate of 1000*l.* per acre, for building purposes: it is often sold, by the square yard superficial, at from 7*s.* to 10*s.* per yard.

Many fortunes have been made in this district, by the landed proprietors, from the richness of the mines. The land is often let or leased out to companies at large "royalties," as they are called, at so much per acre, or per ton, on the produce clear to the proprietor, all expenses of working machinery, &c., being borne by the lessees. Land is frequently sold conditionally; the vender reserving the mines, with the right of working them, subject to provisos for making good the surface and damages. To regulate the mercantile and monetary transactions of this great commercial body, certain settling days, or "quarter-days," as they are termed, have been fixed upon, this being the general extent of their credits. According to the fixed rule, these settling days occur about a fortnight after each of the four quarter-days of Lady Day, Midsummer Day, Michaelmas Day, and Christmas Day,—the books being closed on each of the above regular quarter-days, and the intervening time allowed for making up the accounts. Thus, for instance, about ten or twelve clear days after the regular quarter-day, the first ironmasters' quarterly meeting, or settling day, is on the Tuesday at Walsall, the next day, Wednesday, at Wolverhampton;—the following days, Thursday, at Birmingham, Friday, at Stourbridge, and Saturday, at Dudley: these being the respective market-days at the above towns, at which times, in the principal inns and mercantile warehouses of these towns, balances are, or should be paid, prices settled, &c. These meetings are also generally attended by persons connected with the coal and iron trades from other districts, as South Wales, Shropshire, &c., as well as the principal iron-merchants of London, Liverpool, &c.

In respect to morals, I think a decided improvement has taken place within the last few years. Bull-baiting and cock-fighting are on the decline. Respectable people discountenance them; and but for the encouragement given to them by interested publicans, they would speedily be forgotten. Education is spreading its genial effects. National, charity, and Sunday schools are become so numerous, that it is the operatives' own faults if their children do not receive the first rudiments of knowledge at least. Much credit is due to the Dissenting body, who have manfully bestirred themselves in this laudable work, and the Established clergy and Catholics are also exerting themselves to the same purpose. Yet, owing to the obstinacy of some parents and the recklessness of others, it must be confessed there are many children still deplorably ignorant.

THE TRAGEDY OF STANTON HARCOURT.

ON the south side of the church of Stanton Harcourt is a monument on which is inscribed:—

Near this place lie the bodies of
JOHN HEWET and SARAH DREW,
An industrious young man and
Virtuous maiden of this Parish,

CONTRACTED IN MARRIAGE;
Who being with many others at Harvest
Work, were both in one instant killed
By lightning on the last day of July,
1718.

<p>Think not by rigorous judgment seized A pair so faithful could expire, Victims so pure heav'n saw well pleased, And snatched them in celestial fire.</p>	<p>Live well and fear no sudden fate When God calls virtue to the grave, Alike 'tis justice soon or late, Mercy alike to kill or save.</p>
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Virtue unmoved can hear the call,
And face the flash that melts the ball.

The story of this unfortunate pair created much interest at the time of their decease, and the following account of it was written by Gay a few days after the melancholy event. "John Hewet was a well-set man of about five-and-twenty. Sarah Drew might be rather comely called than beautiful, and was about the same age. They had passed through the various labour of the year together with the greatest satisfaction; if she milked, it was his morning and evening care to bring the cows to her hand: it was but last fair that he bought her a present of green silk for her straw hat, and the posy on her silver ring was of his choosing. It was that very morning that he had obtained the consent of her parents, and it was but till the next week that they were to wait to be happy. Perhaps in the interval of their work they were now talking of the wedding clothes, and John was suiting several sorts of poppies and field flowers to her complexion, to chuse her a knot for the wedding-day; while they were thus busied (it was on the last of July, between two and three in the afternoon,) the clouds grew black, and such a storm of lightning and thunder ensued, that all the labourers made the best of their way to what shelter the trees and hedges afforded. Sarah was frightened and fell down in a swoon on a heap of barley. John, who never separated from her, sat down by her side, having raked together two or three heaps of the barley to secure her from the storm. Immediately there was heard so loud a crack as if heaven had split asunder; every one was now solicitous for the safety of his neighbour, and called to one another throughout the field; no answer being returned to those who called to our lovers, they stept to the place where they lay; they perceived the barley all in a smoke, and then spied this faithful pair. John with one arm about Sarah's neck, and the other held over her as to screen her from the lightning. They were struck dead, and stiffened in this tender posture. Sarah's left eyebrow was singed, and there appeared a black spot on her breast; her lover was all over black, but not the least signs of life were found in either. Attended by their melancholy companions, they were conveyed to the town, and the next day were interred in Stanton Harcourt church-yard. My Lord Harcourt, at Mr. Pope's and my request, has caused a stone to be placed over them, upon condition that we furnished the epitaph, which is as follows:—

When Eastern lovers feed the fun'ral fire,
On the same pile the faithful pair expire.
Here pitying Heav'n that virtue mutual found,
And blasted both that it might neither wound;
Hearts so sincere th' Almighty saw well pleas'd,
Sent his own lightning and the victims seized.

But my Lord is apprehensive the country-people will not understand this, and Mr. Pope says he will make one with something of scripture in it, and with as little of poetry as Hopkins and Sternhold."

The epitaph engraven on their monument is that written by Pope, and to which Gay alludes above.

The 'Celadon and Amelia' of Thomson was probably

suggested by this catastrophe; but the poet has made the tragedy more touching by the escape of one of the lovers:—

“ ————Young Celadon

And his Amelia were a matchless pair;
With equal virtue form'd, and equal grace,
The same, distinguish'd by their sex alone:
Hers the mild lustre of the blooming morn,
And his the radiance of the risen day.

They lov'd: but such their guileless passion was,
As in the dawn of time informed the heart
Of innocence, and undissembling truth—
'Twas friendship heightened by the mutual wish,
Th' enchanting hope, and sympathetic glow
Beam'd from the mutual eye. Devoting all
To love, each was to each a dearer self;
Supremely happy in the awaken'd power
Of giving joy. Alone, amid the shades,
Still in harmonious intercourse they liv'd
The rural day, and talk'd the flowing heart,
Or sigh'd, and look'd unutterable things.

So pass'd their life, a clear united stream,
By care unruffled; till, in evil hour,
The tempest caught them on the tender walk,
Heedless how far, and where its mazes stray'd,
While, with each other blest, creative love
Still bade eternal Eden smile around.
Presaging instant fate her bosom heav'd
Unwonted sighs, and stealing oft a look
Of the big gloom on Celadon, her eye
Fell fearful, wetting her disordered cheek,
In vain assuring love, and confidence
In Heaven, repress'd her fear; it grew, and shook
Her frame near dissolution. He perceived
Th' unequal conflict, and as angels look
On dying saints, his eyes compassion shed,
With love illumin'd high. 'Fear not,' he said,
'Sweet innocence! thou stranger to offence
And inward storm! He, who yon skies involves
In frowns of darkness, ever smiles on thee
With kind regard. O'er thee the secret shaft
That wastes at midnight, or th' undreaded hour
Of noon, flies harmless; and that very voice,
Which thunders terror thro' the guilty heart
With tongues of seraphs, whispers peace to thine.
'Tis safety to be near thee sure, and thus
To clasp perfection!' From his void embrace,
Mysterious Heaven! that moment, to the ground,
A blackened corse, was struck the beauteous maid:
But who can paint the lover, as he stood
Pierc'd by severe amazement, hating life,
Speechless, and fix'd in all the death of woe!
So, faint resemblance! on the marble tomb,
The well-dissembled mourner stooping stands,
For ever silent, and for ever sad."

BITTING OF HORSES.

[From a Correspondent.]

NEXT to those branches of knowledge which relate to man himself, may perhaps be placed those which relate to such of the inferior animals as man is dependent upon, either for assistance or enjoyment; seeing that not only man's property and comfort are often largely at stake in them, but, as we have brought them under subjection to us, and made them, contrary to their instinct, dependent upon us, we owe them a debt of kindness and attention which it is our duty to pay. Nevertheless, it is a lamentable fact that they often suffer grievously from us, not only through wanton cruelty, but from the vagaries of absurd rather than ill-intentioned ignorance.

The general diffusion of information upon almost every subject has already contributed to the removal of some evils of this class;—thus, we now rarely see horses with their tails amputated at the root to concentrate their strength in the remaining portion of the backbone,—their noses slit to improve their wind,—and cats with their ears and tails cut off to make them good mousers; but there yet remain many points in which that noble and valuable animal, the horse, is made to suffer through our ignorance and prejudice. Not only are his diseases and accidents often abandoned to the most ignorant and empirical practice, but fatal or distressing errors are committed in respect to his

habitual and daily management, which a juster knowledge of the structure of some of his parts, and of his animal faculties, and a judicious, rather than capricious, adaptation of our equipments, would obviate and banish.

Mr. Bracy Clark, whose professional works abound in much valuable matter, has directed attention to some errors in the management of the horse, the cruelty of which, though generally lost sight of by habitual recurrence, his humanity has prompted him to scrutinize, with the view of pointing out the remedy.

On the application of bits to the horse's mouth, he says,—“A very large portion of their [horses] cruel and unmerited sufferings will be found, on examination, to proceed from the cherishing and encouraging unfounded fears and apprehensions, which ought, with propriety, to have no existence. Fashion also has had her share in it; and, not unfrequently, it is the interested purposes or motives of the makers and venders of bits, and of those who derive a profit in recommending them, and are sharing in the plunder of their masters: some, again, love a mystery, and by such uncouth and complicated machinery guard this department of knowledge from being intelligible, and so maintain their empire and secure their interests; for the true biting of the horse does not require complication, or harshness, or severity, but every purpose is best served and obtained by the direct contrary. For harshness is much more likely to produce the disobedience and danger that it pretends to prevent than to render it less accessible; making them commit, from pain or rage, the very faults we complain of, and then desire to remove by a further severity.”

He then concludes an inquiry into the origin of the word “bit,” by saying “that it is pretty clear this instrument for the horse's mouth was first called in England the *bittle*, a much better term than the present, and of which, at some future day, documentary and positive proof may possibly be obtained by searching early records. The word, indeed, is so much more significant than the present, that one should be almost tempted to restore it again to its place in our language.”

We may refer the reader to this Essay for a curious dissertation on the various forms of bits, and on the mode of biting employed by the ancients, and proceed to notice two evils in the practice of the present day, against which the author is justly severe. These are the *lever* or *curb-bits*, and the *bearing-rein*. Of the first he observes, “the sporting-man formerly, and the hunting-man and the traveller also, used to deride as preposterous and unjockey-like these long lever-bits, or machines, both as unfair and betokening ignorance or cowardice, or maladdress in the person using them; and to ride ‘hard and sharp,’ as it was called, was left alone to the butchers, and their blue-frocked apprentices; but now the custom has become almost general, and even fashionably encouraged by the example of some courtly foreigners of distinction who honour us with their visits.

“And so careful were our forefathers of preserving the freshness of the horse's mouth with their riding-horses, that the stable-boys and grooms had their watering-bits allowed them for all purposes of exercising and leading out of the stable, that their rude and clumsy hands and little skill should not in any manner harden and spoil the horse's mouth; now, so little jealousy exists on that head, that lads of every description belonging to a stable are seen going about with these wrenching-irons in the mouths of their horses, as commonly as the other kind of bits.

“It appears manifest, from the construction of this instrument, that its whole force is exerted upon the jaw itself, and that it has power to pinch the bars with a cruel violence, even to the fracture of the bone, and this with branches of no unusual length has often

happened. It can also crush and bruise, and totally destroy the tender covering of the inside of the mouth, and the skin also beneath the jaw. By violent pulling, or if the horse should fall upon the ground with these levers, little less than the fracture of the jaw can be expected, of which we have a case in point, amongst others, which occurred at Knightsbridge, and was under the care of our friend Rogers, an eminent veterinary surgeon. The piece of broken bone which he took from the jaw, after excruciating suffering, and which he presented to me, is as large, or larger, than a large-sized filbert.”

Respecting the bearing-rein, he remarks, “This horrid invention was unknown till of late years; and who had the honour of inventing it we know not, or even the nation whence it came, but we recollect, forty years ago, it was but in little use to what it is at present; and in France, at that period so rare was it, that, in a conversation I had with some of the professors of the Charenton school, it was with difficulty I could make them understand the thing I meant, but which at last they made out to be their *fausse rein*. It is now in Paris, with the cab-horses, more severely used than in any other country, and with an almost total disregard of the feelings of the animal.

“This foul and unfair instrument is very easily abused, since no guiding hand testifies the pressure that it inflicts with severity unknown except to the suffering animal himself, and often in exact opposition to the other irons which the hand guides, and of which it contains the reins. It has become so common, and so cruelly misused, that it is, if possible, a greater evil than the whip, and the more grating because it passes unseen, and hardly obtains the least notice or commiseration.

“I know very well the want of safety in their horses' going will be urged as the pretence; but why not first rectify the shoeing, the cause of all this, which can be done without difficulty, as hundreds can testify, and then see if the *bearing-reins* be necessary?”

Bracy Clark has invented a very simple and useful bit, of the snaffle kind, which effects all the purposes which he has pointed out as requisite in a bit.

Contentment.—Thou art poor: what difference is there betwixt a greater man and thee, save that he doth his businesses by others, thou doest them thyself? He hath caters, cooks, bailiffs, stewards, secretaries, and all other officers for his several services: thou providest, dressest, gatherest, receivest, expendest, writest for thyself. His patrimony is large; thine earnings small. If Briareus feed fifty bellies with his hundred hands, what is he the better than he that with two hands feedeth one? He is served in silver: thou in a vessel of the same colour, of lesser price; as good for use, though not for value. His dishes are more dainty; thine as well relished to thee, and no less wholesome. He eats olives, thou garlic: he mislikes not more the smell of thy sauce than thou dost the taste of his. Thou wantest somewhat that he hath: he wisheth something which thou hast, and regardest not. Thou couldst be content to have the rich man's purse; but his gout thou wouldst not have; he would have thy health, but not thy fare. If we might pick out of all men's estates that which is laudable, omitting the inconveniences, we would make ourselves complete; but if we must take all together, we should perhaps little advantage ourselves with the change; for the most wise God hath so proportioned out every man's condition, that he hath some just cause of sorrow inseparably mixed with other contentments, and hath allotted to no man living an absolute happiness, without some grievances; nor to any man such an exquisite misery, as that he findeth not somewhat wherein to solace himself, the weight whereof varies according to our estimation of them.—*Bishop Hall.*

* * * The Office of the Society for the Diffusion of Useful Knowledge is at 59, Lincoln's Inn Fields.

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PETRA.



[Amphitheatre at Petra.]

THE late learned Dr. Vincent, in his "Periplûs of the Erythræan Sea," thus speaks of the city of Petra before its ruins were laid open to modern curiosity by the adventurous efforts of recent travellers*.

"Petra is the capital of Edom or Seir, the Idumæa or Arabia Petræa of the Greeks, the Nabatæa, considered both by geographers, historians, and poets, as the source of all the precious commodities of the East. And as Idumæa is derived from Edom, or Esau the son of Isaac, so is Nabatæa deduced from Nebaioth the son of Ishmael. 'The Traditions of the Arabians' refer to Ishmael the son of Abraham, as the father of the families that settled in Hejaz, which is Arabia Deserta; and to Edom as the ancestor of the Idumæans, who

* Dr. Vincent was Dean of Westminster. In his preface to his 'Periplûs,' he says, "The Periplûs of the Erythræan Sea is a title prefixed to a work which contains the best account of the commerce carried on from the Red Sea and the coast of Africa to the East Indies, during the time that Egypt was a province of the Roman empire. * * * The Erythræan Sea is an appellation given, in the age of the author, to the whole expanse of ocean reaching from the coast of Africa to the utmost boundary of ancient knowledge on the east; an appellation, in all appearance, deduced from their entrance into it by the straits of the Red Sea, styled Erythra by the Greeks." It is not certain who the author of the Periplûs was. Dr. Vincent's works on the "Commerce of the Ancients" were published by him in a collected edition in 1807.

occupied Arabia Petræa. The name of this capital (Petra), in all the various languages in which it occurs, implies a rock; and as such it is described in the Scriptures, in Strabo, and Al Edrissi; but it is a rock supplied with an abundant spring of water, styled Thomud by the Nubian, which gives it a distinction from all the rocks in the vicinity, and constitutes it a fortress of importance in the desert. Strabo did not visit it himself, but describes it from the account of his friend Athenodorus the philosopher. Athenodorus spoke with great admiration of the people, their civilized manners, and quiet disposition. Moses was forbidden to molest the sons of Edom in his passage through the wilderness; but that there was then a considerable commerce in the country we have reason to conclude, from the conquest of Midian, in its neighbourhood, by Gideon, not many years later, when gold is described as abundant among the Midianites, and their wealth in camels a proof of the traffic by which they subsisted. In the reign of David, Hadad the prince of Edom was driven out, and Hebrew garrisons were placed in Elath and Ezion Geber, where Prideaux supposes that David commenced the trade of Ophir, which was afterwards carried to its height by Solomon."

The whole commerce of the East originally passed

through Arabia Petræa to Phœnicia, Tyre, and Egypt. "Notwithstanding," continues Dr. Vincent, "that the caravans decreased in proportion to the advance of navigation, still Petra was a capital of consideration in the age of the Periplûs; there was still a proportion of the trade passed from Leukè Komè [the white village] to this city, and its princes maintained a rank similar to that of Herod in Judæa. In all the subsequent fluctuations of power some commercial transactions are discoverable in this province; and if Egypt should ever be under a civilized government again, Petræa would be no longer a desert."

The late John Lewis Burckhardt, in a journey which he made from Damascus through the mountains of Arabia Petræa to Cairo, in the summer of 1812, discovered the ruins of Petra. "I was particularly anxious," he says, in his Journal, under date of August 22, "of visiting Wady Mousa, of the antiquities of which I had heard the country-people speak in terms of great admiration, and from thence I had hoped to cross the desert in a straight line to Cairo; but my guide was afraid of the hazards of a journey through the desert. I therefore pretended to have made a vow to slaughter a goat in honour of Haroun (Aaron), whose tomb I knew was situated at the extremity of the valley, and by this stratagem I thought that I should have the means of seeing the valley in my way to the tomb. To this my guide had nothing to oppose; the dread of drawing upon himself, by resistance, the wrath of Haroun, completely silenced him." Farther on, speaking of the antiquities of Wady Mousa, Burckhardt says, "Of these I regret that I am not able to give a very complete account: I well knew the character of the people around me;—I was without protection in the midst of a desert where no traveller had ever before been seen; and a close examination of these works of the infidels, as they are called, would have excited suspicions that I was a magician in search of treasures; I should at least have been detained and prevented from prosecuting my journey to Egypt, and in all probability should have been stripped of the little money which I possessed, and, what was infinitely more valuable to me, of my journal-book. Future travellers may visit the spot under the protection of an armed force; the inhabitants will become more accustomed to the researches of strangers, and the antiquities of Wady Mousa will then be found to rank amongst the most curious remains of ancient art." * * "In comparing the testimonies of authors cited in 'Reland's Palæstina,' it appears very probable that the ruins in Wady Mousa are those of the ancient Petra, and it is remarkable that Eusebius says the tomb of Aaron was shown near Petra."

Colonel Leake, who edited 'Burckhardt's Travels,' thus points out, in the preface, the probabilities that the ruins in Wady Mousa were those of the ancient Petra:—

"The country of the Nabatæi, of which Petra was the chief town, is well characterised by Diodorus as containing some fruitful spots, but as being, for the most part, desert and waterless. With equal accuracy, the combined information of Eratosthenes, Strabo, and Pliny, describes Petra as falling in a line drawn from the head of the Arabian Gulf (Suez) to Babylon; as being at the distance of three or four days from Jericho and of four or five from Phœnicon, which was a place now called Moyeleh, on the Nabatæan coast, near the entrance of the Ælanitic Gulf; and as situated in a valley of about two miles in length, surrounded with deserts, inclosed within precipices, and watered by a river. The latitude of 30° 20', ascribed by Ptolemy to Petra, agrees moreover very accurately with that which is the result of the geographical information of Burckhardt. The vestiges of opulence, and the apparent date of the architecture at Wady Mousa, are equally

conformable with the remains of the history of Petra found in Strabo, from whom it appears that, previous to the reign of Augustus, or under the latter Ptolemies, a very large portion of the commerce of Arabia and India passed through Petra to the Mediterranean, and that armies of camels were required to convey the merchandise from Leuce Come [Leukè Komè], on the Red Sea, through Petra, to Rhinocolura, now El Arish. But among the ancient authorities regarding Petra, none are more curious than those of Josephus, Eusebius, and Jerome, all persons well acquainted with these countries, and who agree in proving that the sepulchre of Aaron in Mount Hor was near Petra. From hence it seems evident that the present object of Mussulman devotion, under the name of the tomb of Haroun, stands upon the same spot which has always been regarded as the burying-place of Aaron; and there remains little doubt, therefore, that the mountain to the west of Petra is the Mount Hor of the Scriptures, Mousa being, perhaps, an Arabic corruption of Movra, where Aaron is said to have died."

Captains Irby and Mangles, who, in 1818, visited Petra, with considerable risk, and only after persevering in the face of numerous obstacles, say, in their account:

"Our defile brought us directly down into this place [the valley of Wady Mousa], whose name had become so familiar to us: it is, at the point where we entered it, a stony but cultivated valley, of moderate size, without much character or beauty, running in a direction from east to west. A lesser hollow, sloping down to it from the southward, meets it at an angle: at the upper end of the latter valley is the village seen over stages of hanging fruit-grounds, which are watered by a spring. * * Some hundred yards below this spring begin the outskirts of the vast necropolis of Petra. * * As we advanced, the natural features of the defile grew more and more imposing at every step, and the excavations and sculpture more frequent on both sides, till it presented at last a continued street of tombs, beyond which the rocks, gradually approaching each other, seemed all at once to close without any outlet. There is, however, one frightful chasm for the passage of the stream, which furnishes, as it did anciently, the only avenue to Petra on this side [the eastern]. It is impossible to conceive any thing more awful or sublime than such an approach; the width is not more than just sufficient for the passage of two horsemen abreast,—the sides are in all parts perpendicular, varying from four hundred to seven hundred feet in height,—and they often overhang to such a degree, that, without their absolutely meeting, the sky is intercepted and completely shut out for one hundred yards together, and there is little more light than in a cavern. The screaming of the eagles, hawks, and owls, who were soaring above our heads in considerable numbers, seemingly annoyed at any one approaching their lonely habitation, added much to the singularity of the scene."

On arriving at the theatre, "Here," continue our travellers, "the ruins of the city burst on the view in their full grandeur, shut in, on the opposite side, by barren, craggy precipices, from which numerous ravines and valleys, like those we had passed, branch out in all directions;—the sides of the mountains, covered with an endless variety of excavated tombs and private dwellings, presented altogether the most singular scene we ever beheld;—and we must despair to give the reader an idea of the singular effect of rocks, tinted with most extraordinary hues, whose summits present us with Nature in her most savage and romantic form, whilst their bases are worked out in all the symmetry and regularity of art, with colonnades and pediments, and ranges of corridors adhering to the perpendicular surface."

This truly singular city—singular not merely from

its ruins, as exhibiting its ancient opulence and grandeur, but also from its being literally a city hewn out of the rock—has been minutely illustrated in the ‘*Voyage de l’Arabie Pétrée,*’ by MM. Leon de Laborde and Linant, from which the view of the amphitheatre which accompanies this account is taken. This splendid work was published in 1830, in Paris, by Laborde, in the absence of his colleague, who was at the time engaged in the service of the Pasha of Egypt. Speaking of Petra, Laborde says, in his preface, “Vague traditions had only apprized us that a town existed which surpassed in extent and magnificence the Queen of the Desert—the famous Palmyra.” The plates in this volume attest the magnificence of the city, and show what a continued series of labours must have been expended, during different ages, on the various works hewn out of the rock,—the dwellings, tombs, and temples. We shall have another occasion to return to the description of this city.

THE BRIDAL GIFT.—A TALE.

(From *The Plain Englishman.*)

THERE was merriment and rejoicing in the little village of Ifley, for one of its prettiest maidens was that day to be led to the altar by one of its honestest youths. It was the season of temporary repose and of anxious hope, between the hay and the corn harvest, which is perhaps one of the most interesting of the whole year. Two or three clusters of villagers were to be seen in the church-yard, looking with happy haste for the arrival of the bride and bridegroom. Their smiling faces were in harmony with the universal brightness of the landscape which lay around. The Thames, which is here but a little streamlet, was sparkling in the beaming sunshine, or reflecting the few passing clouds of a summer morning;—the cattle were grazing in the green fields, which were now free for their unconfined enjoyment;—the light breeze was passing over the ripening corn, swaying it with the most graceful and wave-like motion. The old Saxon church stood amidst the graves of twenty generations, a splendid monument of ancient piety. As the aged people sat in its spacious porch, they looked back to the time when their hopes of happiness had been as ardent as those of the young pair, who were now approaching to begin the same course of domestic comfort, which they had sought in the morning of their lives; and some sighed for disappointed expectations, and some wept for their departed companions. As the youthful folks tripped over the green mounds whose lessons were at that moment forgotten, they thought only of life as of one long summer day, and they looked at the happiness they were about to witness as something which might be privileged from the clouds and storms of maturer years. But the approach of the minister disturbed their reveries.

Alice Holt and James Webb had plighted their vows, and the bells of the old tower were pouring forth that music which is always sweet, and the smiling gossips had strewed flowers in their way, and the kind-hearted pastor had given them an affectionate greeting, when a reverend stranger stood in their homeward path and implored a blessing for them. The young people returned his salutation with natural politeness, and invited him to partake of their humble entertainment. There was something in the stranger’s appearance that on any ordinary occasion would have commanded respect. His dress was very plain but extremely neat;—his garb was of an antiquated fashion, but it seemed as if no modern taste would accord with the wearer. His long grey hair curled upon his unstooping shoulders; and his staff seemed rather the companion of a vigorous man than the support of an infirm one. The stranger

accepted the offer which was made him, and took his seat at the wedding festival without causing or experiencing embarrassment.

After the cup had gone merrily round to those pledges of good-will which were much sincerer than the compliments of more splendid boards, the stranger rose to propose a sentiment. Adapting his language to the homely garb in which the feelings of the other guests had been expressed, he exclaimed, with much emphasis, “May a good turn never be forgotten.” The toast went round, but the stranger did not sit down. “My friends,” he continued, “I came here this day to pay a debt. It is of very long standing, but the obligation to discharge it is not the less absolute. Thirty years ago I lived in this village. There is a token by which that good old man in the chimney corner will remember me, but that is for his own ear. I was in trade;—my means were small,—and I was unfortunate. I sold all; and I thank God I paid all that I was in debt. Without a shilling in the world, I determined to go abroad. My resolution was soon acted upon; and I communicated it to no one but the father of Alice Holt. On the morning of my departure he met me at the mill. He was the best friend I ever had. He wept like a child at our separation, and—excuse my own tears—he thrust a purse into my hands, which I believe contained the savings of his life. I long struggled against receiving the gift; but he would hear of no excuse. My wants, said he, are few and are soon satisfied. A little more labour will make me once again as rich; but for you to be voyaging to a foreign land, without a penny to buy you respect, I cannot bear it. Pay me if ever you should come home rich: if you find me gone, I may leave a wife or a child that you may return it to.”

There was a deep silence in all the company; and the bride was in tears. “Alice,” continued the stranger, “do not think me an intruder upon your mirth if I thus call up the memory of the most kind-hearted man I ever knew. Those are sweet tears which you shed, and you owe them to such a father. That happiness is the most secure which can afford to listen to the claims of truth and feeling. But to continue my story. Your father left ten pounds in my hand, and I made a secret vow that no temptation of idleness or folly should prevent me putting his loan to good interest. I obtained a passage to one of our colonies. I engaged in a very humble employment; but I gradually saved money. I rose in the confidence of my master, and my salary was increased. I at length obtained a small share in his business: I exerted myself so much, that after some years I was admitted to half the profits. My partner died, and I stood in his place, an opulent British merchant. I at length came home with more than I deserve. But my good fortune has been the work of another’s bounty; and I shall consider myself a steward for my fellow-creatures. Alice, there is the amount of your father’s loan,—it could not be returned at a better season. Young man,” continued he, addressing himself to the bridegroom, “I have heard that you are honest, industrious, and pious. Your wife has her father’s features, and, I trust, her father’s heart. The debt I have paid will be a marriage-portion, not the less acceptable for being unexpected. It will stock a farm; frugality and prudence will make it profitable to you.”

Alice and her husband rose to stammer out their thanks—for the paper which the stranger presented to the bride was a note for a thousand pounds. The wondering guests also rose with one accord—but the stranger was gone.

The bridal-gift was not bestowed upon unworthy objects. James and Alice were not intoxicated by their good fortune. They had abundance, and something for the necessitous.

FABLE OF THE LION AND OTHER ANIMALS.



[The Lion and other Animals.]

THE amiable poet Cowper thus ridicules that unimaginative spirit which either cannot understand, or refuses to enjoy, the pleasure and instruction which may be conveyed through the medium of a fable:—

“ I shall not ask Jean Jacques Rousseau
If birds confabulate or no;
'Tis clear that they were always able
To hold discourse, at least in fable.
And e'en the child who knows no better
Than to interpret by the letter
A story of a cock and bull,
Must have a most uncommon skull.”

In his ‘Tirocinium,’ or a ‘Review of Public Schools,’ he exclaims—

“ How!—turn again to tales long since forgot,
Æsop and Phædrus and the rest?—Why not?”

The fable which the wood-cut is intended to illustrate has a more direct reference to scenes of real life than some other fables which require to have their aim pointed out. The practice of drawing a formal lesson or moral from a fable strips it of its poetic charm. The meaning should lie just under the surface—neither too obvious, nor recondite. Without violating this rule, however, the reader may be reminded that, setting aside private life, there are some fine historical examples which illustrate the fable. All history is full of the assertion of brute force or strength against the claims of justice and equity when not backed by a power equally strong; but the direct application to the fable will consist of cases which exhibit a coalition where the strongest of the allies secures what has been obtained by joint co-operation.

The version of the fable given by Dodsley is as follows:—

“ A leopard, a lynx, and a wolf were ambitious of the honour of hunting with the lion. His savage majesty graciously condescended to their desire, and it was agreed that they should all have an equal share in

whatever might be taken. They scour the forest, are unanimous in the pursuit, and, after a very fine chace, pulled down a noble stag. It was divided with great dexterity by the lynx into four equal parts; but just as each was going to secure his share, ‘Hold!’ says the lion; ‘let no one presume to serve himself till he hath heard our just and reasonable claims. I seize upon the first quarter by virtue of my prerogative; the second I think is due to my superior conduct and courage; I cannot forego the third on account of the necessities of my den; and if any one is inclined to dispute my right to the fourth, let him speak.’ Awed by the majesty of his frown and the terror of his paws, they silently withdrew, resolving never to hunt again but with their equals.”

POLITICAL ECONOMY OF OUR ANCESTORS. No. III.

SINCE writing our last Article under this head, we have found some account of the author of the old ‘Dialogue’ under examination. He is mentioned by Anthony Wood in the First Part of his ‘Fasti Oxonienses,’ by the name of William Stafford; but nothing more appears to have been known about him by that diligent and inquisitive antiquary, except that he was the author of this Dialogue. The Dialogue itself, however, was reprinted, it appears, in 1751, and attributed to no less a person than William Shakspeare,—“the most extensive and fertile genius,” say the editors, in their dedication to the king, “that ever any age or nation produced.” The author, as we have mentioned, dedicates his work to Queen Elizabeth, “being, as it were, enforced,” he says, “by your Majesty’s late and singular clemency in pardoning certain my undutiful misdemeanour.” This expression the modern editors construed as an allusion to the famous deer-stealing exploit imputed by tradition to our great dramatist.

In the article on Shakspeare, in the first edition of the 'Biographia Britannica,' the work is referred to as an evidence which, if the assigned authorship could be depended on, would be absolutely decisive in the dispute about Shakspeare's learning,—seeing that it contains many quotations from the Greek and Latin classics. Dr. Farmer, in his 'Essay on the Learning of Shakspeare,' has noticed the matter, and set all doubt respecting it at rest. "The book (which he calls an "extraordinary piece") "was not," he observes, "written by Shakspeare. Strype, in his 'Annals,' calls the author 'some learned man,' and this gave me the first suspicion. I knew very well that 'honest John (to use the language of Sir Thomas Bodley) did not waste his time with such baggage books as plays and poems;' yet I must suppose that he had heard of the name of Shakspeare. After a while, I met with the original edition. Here, in the title-page, and at the end of the dedication, appear only the initials 'W. S., Gent.;' and presently I was informed by Anthony Wood that the book in question was written, not by William Shakspeare, but by William Stafford, Gentleman, which at once accounted for the 'misdemeanour' in the dedication; for Stafford had been concerned at that time, and was indeed afterwards, as Camden and the other annalists inform us, with some of the conspirators against Elizabeth, which he properly calls his 'undutiful' behaviour." Dr. Farmer adds, in a note, "I have since observed that Wood is not the first who hath given us the true author of the pamphlet."

But to return to the Dialogue itself. It is now considered to be proved that neither the rise of prices has been occasioned by the rise of rents, nor the rise of rents by the rise of prices; and that the evil would not be remedied either by the landlords universally reducing their rents, or the farmers the prices at which they sold their produce. Search must be made, therefore, for another cause, and another remedy.

The Capper conceives that the *dearth* is, in great part at least, the consequence of the late extensive enclosures of waste and common lands. That matter, the Doctor admits, deserves consideration; but he is not disposed to think that the enclosures can have been the cause of the high prices, although he allows that they have, for the last thirty years, been attended with one great inconvenience, in the popular dissatisfaction and frequent disturbances they had occasioned. "Experience," here observes the Knight, "should seem to prove plainly that enclosures should be profitable, and not hurtful, to the commonweal; for we see that counties where most enclosures be are most wealthy, as Essex, Kent, Northamptonshire, &c. And I have heard a civilian once say, that it was taken for a maxim in his law, this saying,—'that which is possessed of many in common is neglected of all;' and experience showeth that tenants in common be not so good husbands [managers] as when every man hath his part in severalty."

With regard to the alleged diminution of tillage and increase of pasturage of late years, the Doctor observes, in the first place, that most certainly it has not at any rate produced any deficiency in the usual supply of grain. Any decrease that had taken place in the quantity of land under the plough had been compensated by the unusual abundance of the harvests. "For many years past," he says, "an acre has borne in England as much corn as two wont to do." He adds, however, that there is only one way to prevent the inconvenient increase of pasturage, and that is, to make the profit of the plough as good as that of the grazier and the sheepmaster. And this again is to be done in either of two ways, namely, either by raising the price of corn, or by diminishing that of wool.

The Doctor then commences a very able argument in favour of the expediency of permitting the exportation of corn. Though confined in its application to

this one point, the general principles upon which much of the argument is founded would equally go to establish the policy of a generally free-trade in corn, and also in other commodities. He contends that the effect of permitting the free exportation of corn, though it might at first be to raise prices for a short time, would be ultimately to bring them, and to keep them, down. It is surely, he observes in the first place, the right of the husbandman to have the same liberty of carrying what he produces to the best market which is allowed to the breeder of sheep, and to other producers. When the Capper urges, as an objection to this doctrine, that corn is an absolute and universal necessary of life, and therefore not to be put on a level with other wares,—the Doctor answers, "The more necessary that corn is, the more be the men to be cherished that reareth it." His meaning is, not that the rearers of grain have, on the ground of the importance of their occupation, a superior claim upon the mere justice or generosity of the state, but that it is the *interest* of the state to see that their occupation is cherished and encouraged. The Knight asks how he would have men "better cherished to use the plough?" "To let them," he replies, "have more profit by it than they have, and liberty to sell it at all times, and to all places, as freely as men may do other things. But then, no doubt, the price of corn would rise, specially at the first more than at length, yet the price would provoke every man to set the plough in the ground, to till waste grounds; yea, and to turn the lands that is now enclosed for pasture to arable; for every man will the gladder follow that wherein they see the more gains, and thereby must needs ensue both greater plenty of corn within the realm, and also much treasure should be brought into the realm by reason thereof. And besides that, plenty of all other victual increased among us." All this, he maintains, would eventually produce greater cheapness, not only of corn, but of cattle also.

This passage is very curious. We have here probably the first hint, indeed it amounts to a complete statement, of the argument by which it was long afterwards maintained by many of the ablest writers on these subjects, that the bounties granted in this country on the exportation of corn operated materially in keeping down prices at home. A bounty on the exportation of corn was first granted in 1689. A French author, M. Bou-lainvilliers, in a work entitled 'The Interests of France ill-understood in Affairs of Agriculture,' and printed at Amsterdam in 1757, observes:—"In other states, private persons pay the government for the exportation of grain; England acts quite otherwise, and pays them. * * * As long as that monarchy thought only of its own subsistence, it always found itself short of the *necessary*; it was very often obliged to have recourse to foreigners to make up the deficiency of the growth of the nation; but when it made its agriculture an object of commerce, the cultivation of its land became one of the most abundant in Europe." He afterwards calls the granting of these bounties on exportation "the best-concerted stroke of state of all those which have yet appeared in modern politics;" and adds, "Let us combine all the means which that monarchy hath put in use, for an age past, to establish its power, and we shall find that it is to this in particular she is indebted for her elevation." Other passages to the same effect may be found collected in Mr. Charles Smith's 'Tracts on the Corn Trade and Corn Laws,' Supplement, chap. ii., 2nd edition, 1766.

But what, now objects the Knight, should become of us in a year in which the crops chanced to be deficient? In reply the Doctor argues that this calamity would in fact be much better provided for than it then was, by the greater extent of tillage, which, as he had already shown, his plan would ensure. In the market of the whole world, which that plan would open on the one hand to the farmer for the disposal of his produce, on the other to

the consumer for the purchase of corn, he contends that there would be always a sufficient demand and also a sufficient supply. Under the then state of the English law, he asks, might not other nations naturally and justly refuse to assist this country in a year of scarcity, seeing that we rigorously denied all aid to them in similar circumstances? And then comes the following passage, the enlightened spirit of which would do honour to the advanced knowledge and philosophy of the present age: "Surely common reason would that one region should help another when it lacketh; and therefore God hath ordained, that no country should have all commodities, but that which one lacks another brings forth; and that that one country lacketh this year, another hath plenty thereof commonly the same year, to the intent men may know that they have need one of another's help, and thereby love and society to grow among all men the more. But here we would do as though we had need of no other country on earth, but to live all of ourselves, and as though we might make the market of all things as we list ourselves. For though God is bountiful to us, and sends us many great commodities, yet we could not live without the commodities of others. As for example, of Iron and Salt, though we have competently thereof, yet we have not the third part to suffice the realm, and that can in nowise be spared if we well occupy husbandry. Then, tar, rosin, pitch, oil, and steel, we have none at all; and for wines, spices, linen clothes, silks, and colours, though we might live indifferently without them, yet far from any civility should it be."

He afterwards contends that many of the things for which England was then dependent upon foreigners might either be "clean spared," or made in sufficient quantities within the realm. Among such articles he enumerates, "as well looking-glasses as drinking, and also to glaze-windows, dials, tables, cards, balls, puppets (that is, we suppose, dolls), penners (pen-cases), ink-horns, tooth-picks, gloves, knives, daggs (daggers), owches (jewellery), brooches, aglets (tags), buttons of silk and silver, earthen pots, pins and points, hawks' bells, paper both white and brown." Of none of these articles, it would appear, were there any then fabricated in England. Foreigners, too, it is added, "of our wool make cloths, caps, and kerseys; of our fells they make Spanish skins, gloves, and girdles; of our tin, saltcellars, spoons, and dishes; of our broken linen cloths and rags, paper both white and brown." "There is no man," the speaker proceeds, "can be contented now with any other gloves than is made in France or in Spain; nor kersey but it must be of Flanders dye; nor cloth but French or fryseadowe (a kind of frieze, apparently); nor owch, brooch, or aglett, but of Venice making or Milan; nor dagger, swerd (sword), knife, or girdle but of Spanish making, or some outward country; no, not as much as a spur but that is fetched at the milliner. I have heard, within these forty years, when there were not of these haberdashers that sell French or Milan caps, glasses, knives, daggers, swords, girdles, and such things not a dozen in all London; and now, from the towne to Westminster along, every street is full of them, and their shops glitter and shine of glasses, as well drinking as looking, yea, all manner of vessel of the same stuff; painted cruises, gay daggers, knives, swerds, and girdles, that is able to make any temperate man to gaze on them and to buy somewhat, though it serve to no purpose necessary."

Most of these articles, it is observed, derive their value chiefly from the mere labour that has been bestowed upon them, a labour which might occupy English hands instead of being left to be all performed by foreigners, who thus do not need to go to distant lands to collect wealth from mines of gold and silver, "when they can, of vile clay not far sought for, and of pryple

stones and fern roots, make good gold and silver, more than a great many of silver and gold mines would make." It is conjectured that probably more than 100,000*l.* is paid yearly out of England for these foreign luxuries, "only," as it is expressed, "for the labours of the workers of the same, which are set a-work all on our charge. * * Of our wool they make and dye kerseys, frenchadows (perhaps a kind of cloth originally fabricated in France), broad-cloths, and caps, beyond sea, and bring them hither to be sold again." And though "strangers," remarks the Knight, "buy their wool dear, and pay twice custom, that is, both at going out of the wool and when it returns in cloths or caps, yet the same shall be better cheap than that which is made within the realm." At this time, then, we see England, in respect to manufactures, stood to the more advanced countries of the continent in much the same relation in which India stands to us at the present day. The same thing that is now done by England with the cotton of India was then done by Holland and Germany with the wool of England. "Whereof that should come," continues the Knight, "I would fain know."—"Whether," replies the Doctor, "it cometh of our sloth, or of our chargeable fare, or of our idleness, which we Englishmen use percase (perchance) more than other nations, I know not." How greatly must the English have changed since the time when they were thus accounted the idlest nation in Europe! The Doctor afterwards states an interesting fact in illustration of the difficulty that was found to attend all attempts to introduce into the country even the simplest manufactures. He had himself, he says, once asked a bookseller why we had not white and brown paper made within the realm as well as they had made beyond sea; and, it is added, "he answered me that there was paper made a while within the realm; at the last, the man perceived that made it that he could not afford his paper as good [and cheap as it came from beyond the sea, and so he was forced to lay down making of paper." In these circumstances the Doctor contends that it would be good policy to lay prohibitory duties on the importation from abroad of all such articles as could be equally well manufactured at home. It is proper to add, however, that the Knight is made to do battle with him very valorously and stoutly upon this point. And it is to be considered that the expediency of permitting a perfectly free competition on the part of foreigners is by no means so clear in regard to a manufacture which is yet in its infancy, or only about to be experimentally introduced into a country, as in the case of one which has overcome the difficulties of its first establishment. If, after these natural difficulties are over, the manufacture cannot maintain itself against the freest foreign competition, it is plain that it must be in some essential respect unsuited to the country. So long, at all events, as it is only enabled to stand by the support of prohibitions, it is not a source of wealth, but an expense and a burden to the country, which might otherwise supply itself with whatever it obtains from the manufacture at a cheaper rate. But although, as a permanent arrangement, the protective system is thus clearly indefensible, it does not follow that it may not be sometimes beneficially applied as a temporary expedient. A manufacture may require protection while taking root, which shall require none after it has taken root; just as the child requires support and tendence which the man can dispense with. If this aid were denied to the child, he would never grow up to be a man.

THE COW-TREE OF AMERICA.

[From a Correspondent.]

AMONG the various productions of a bountiful Nature few present themselves with a stronger claim to our notice and admiration than the cow-tree of America,

for the first accurate account of which we are indebted to the labours of that distinguished traveller Baron Von Humboldt. Obscure notices of an earlier date had indeed pointed out the existence of plants affording a portable fluid, uniting to the colour and fluidity all the bland and nutritive qualities of animal milk; but, previous to the publication of Humboldt's narrative, these notices attracted little attention, and were classed rather with the fictions of travellers than with the realities of Nature.

Of these notices the first which bears any probable reference to the tree subsequently noticed by Humboldt is the figure in one of the collections of the celestial tree, contained in Mexican drawings preserved in the Vatican, and referred to by Humboldt in the second volume of his 'Researches concerning the Institutions and Monuments of the Ancient Inhabitants of America,' translated by the late Helen Maria Williams; at the thirty-second page of which we find the following passage, which manifestly refers, either to the Palo de Vaca of the coast of Venezuela, or to some tree possessing similar properties, existing, not improbably, in some of the less-perfectly explored districts of the kingdom of New Spain:—"Besides the tradition of the four suns, and the customs which we have already described, the Cod. Vatican. anon., No. 3738, contains several curious figures. Of these we shall mention, fol. 4, the *Chichihualquehuill*, tree of milk, or celestial tree, that distils milk from the extremity of its branches, and around which are seated infants, who have expired a few days after their birth."

It was hardly to be supposed that a production so singular as that of a tree which exhibited so extraordinary and almost incredible combination of animal and vegetable functions, should escape the notice of the earlier Spanish writers on the natural history of the Spanish dominions in the New World; but these accounts were so mixed up with the marvellous, as to be little, if at all, regarded by persons of judgment. Laet, a Dutch writer of the seventeenth century, appears to have been the first who paid any serious attention to their accounts; and in his 'Description of the West Indies,' when noticing the productions of the province of Cumanà, we find the following remarkable passage, quoted by Humboldt in the fourth volume of the English translation of his personal narrative, page 215:—"Inter arbores quæ sponte hic passim nascuntur, memorantur à scriptoribus Hispanis quædam quæ lactenum quemdam liquorem fundunt, qui durus admodum evadit instar gummi, et suavem odorem de se fundit; *aliæ quæ liquorem quemdam edunt instar lactis coagulati, qui in cibis ab ipsis usurpatur sine noxâ.*"—Descr. Ind. Occid. lib. xviii., cap. 4, (ed. 1633) p. 672. (Among the trees which grow spontaneously in this province, the Spanish writers speak of some which yield a milky fluid, that becomes hard, like gum, and exhales an agreeable odour; and others which afford a liquor resembling coagulated milk, used as food by the inhabitants without producing any injurious effects.) Such is the testimony of Laet, given upon the authority of the earlier Spanish historians, and clearly referring to the tree which Humboldt has since rendered so celebrated.

So little, indeed, does the existence of such a tree appear to have gained credit, or even to have been known, in Europe previous to the scientific expedition of Humboldt and Bonpland, that the former of these travellers seems to have heard of it for the very first time on his visit to Porto Cabello, in the beginning of March, 1800; and until convinced of the reality of the fact by actual observation, he admits that he was led, from his previous knowledge of the acid, bitter, and more or less noxious properties of the milky juices of plants in general, to regard the accounts he had received of this tree with doubt and suspicion. A trial of the milk, which he and his companion tasted for the

first time on his second visit to the plantation of Barbula, on his return from Porto Cabello by the new road to Valencia, completely removed his doubts, and satisfied him that the accounts he had received were neither fictitious nor exaggerated. "We drank," says this distinguished traveller, "considerable quantities of it in the evening, before we went to bed, and very early in the morning, without feeling the least injurious effect." He describes this milk as tolerably thick, glutinous, perfectly bland, and destitute of acrimony, and possessing an agreeable and balmy smell; and only complains of its glutinous property rendering it slightly disagreeable. This vegetable-milk forms a principal article of food with the negroes, and poor people who work in the plantations. They take it along with bread, made either of the root of the cassava (*janipha manihot*), or of Indian corn (*zea mays*); and, according to the testimony of the major domo of the farm, these people grow sensibly fatter during the season in which this milk is obtained in the greatest abundance. But it is not in its appearance or taste alone that this milk resembles that of animals, but in its possession of a strongly-animalized substance, which separates from the liquid on its exposure to the air, and which the inhabitants regard as analogous to cheese, and name it accordingly. This extraordinary tree is supposed by Humboldt to be peculiar to the Cordillera of the coast, particularly from Barbula to the lake of Maracaybo. A few plants grow near the village of San Mateo, so celebrated for the cultivation of wheat; and it was also found by that distinguished botanist, Mr. Brideneyer, at a distance of three days' journey to the east of Caraccas, in the valley of Caucagua, where it is known by the name of *arbol de leche*, or the milk-tree; and where the inhabitants, as Humboldt acquaints us, "profess to recognize, from the thickness and colour of the foliage, the trunks that yield the most juice,—as the herdsman distinguishes, from external signs, a good milch cow." At the farm of Barbula, this vegetable fountain is more aptly termed the *palo de vaca*, or cow-tree. It rises, as Humboldt informs us, like the broad-leaved star-apple (*chrysophyllum cainito*), to a height of from thirty to forty feet, and is furnished with round branches, which, while young, are angular, and clothed with a fine heavy down. The leaves are alternate, petiolate, oblong, rounded at either extremity, and terminated with a very short point, or acumen,—very entire at their edges,—their veins reticulated, and the primary ones projecting on the surface;—they are tough or leathery, very smooth, nine or ten inches in length, and hardly four in breadth: the petioles, or footstalks of the leaves, are thick, furrowed, smooth, eight or nine inches long, and unfurnished with stipules at their base. The flowers, unfortunately, have never yet been seen by any botanist, and hence nothing is known with certainty as to the genus to which it belongs: the fruit resembles the drupe of a walnut, is fleshy, globular, and (when recent?) green, containing one or two one-seeded nuts. The trunk, on being wounded, yields its bland, agreeable, and nutritious fluid in the greatest profusion, especially at the rising of the sun. "It is not here," says Humboldt, "the solemn shades of forests,—the majestic course of rivers,—the mountains wrapped in eternal frost,—that excite our emotion. A few drops of vegetable juice recall to our minds all the powerfulness and the fecundity of nature. On the barren flank of a rock grows a tree with coriaceous and dry leaves. Its large woody roots can scarcely penetrate into the stone. For several months of the year, not a single shower moistens its foliage. Its branches appear dead and dried; but when the trunk is pierced, there flows from it a sweet and nourishing milk. It is at the rising of the sun that this vegetable fountain is most abundant. The blacks and natives are then seen hastening from all quarters, furnished with large bowls to receive the

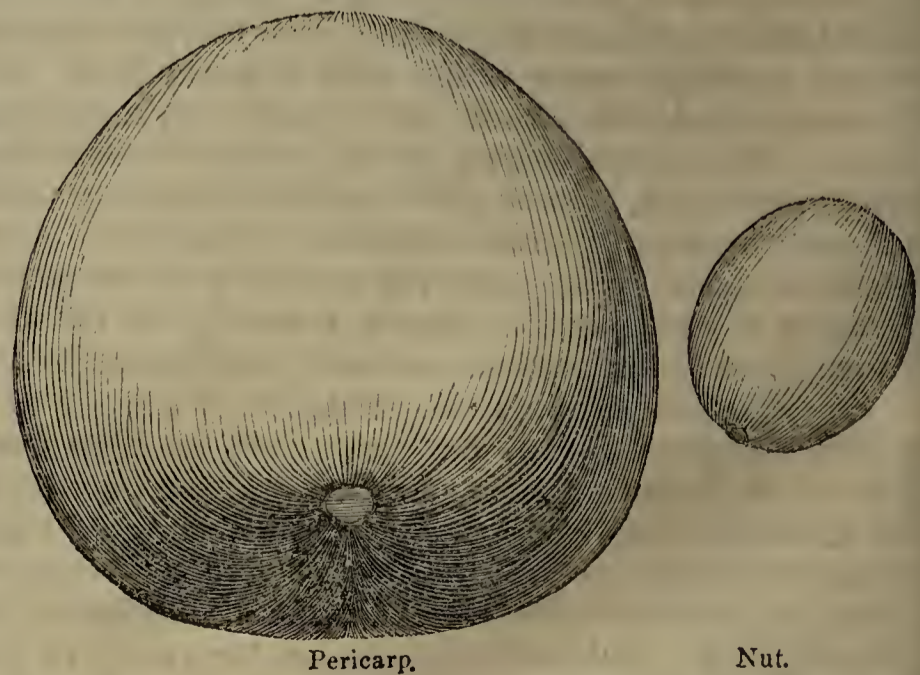
milk, which grows yellow, and thickens at its surface. Some employ their bowls under the tree itself, others carry the juice home to their children. We seem to see the family of a shepherd who distributes the milk of his flock."

But although the existence of this tree has been supposed by our great naturalist to be confined to the narrow limits of the Cordillera of the coast of Venezuela, we are inclined, from other evidence, to believe that either the same, or a tree of the same or of a kindred genus is to be found far more extensively diffused throughout the forests of the New World. We have already noticed the Mexican tradition, preserved in the Vatican manuscript quoted by Humboldt, as furnishing a ground for believing that stocks of this tree formerly existed, and may perhaps yet be found, in some of the almost unknown regions of the extensive territory of New Spain; and we possess direct evidence of the existence of three distinct trees, possessing very nearly similar properties, in the vast and humid forests of the provinces of Chocò and Popayan. Mr. Thomas Higson, formerly engaged in commercial transactions in South America, but at present resident in the island of Jamaica, in a letter addressed to Mr. Watts, the British Consul at Carthagena, Columbia, of the date of the 16th of May, 1824, speaks of three trees found in the forests adjoining to Ysconde and Citarà (or Quibdo, the capital of the Chocò), and known to the inhabitants by the names of "lyria, popa, and sandè," the two former of which yield an agreeable and nutritious milk, corresponding exactly with Humboldt's account of the milk of the Palo de Vaca, and, like it, employed as an article of sustenance by the poorer inhabitants, although superciliously rejected by the more wealthy, who merely avail themselves of its viscosity to use it as a substitute for birdlime in catching parrots. The sandè, however, which in appearance more closely resembles Humboldt's tree, although it yields its milk in greater profusion, differs materially from it in its general properties, its milk being thinner, of a bluish cast, resembling skimmed milk, and less agreeable to the palate,—hence not employed, like the milk of both the lyria and the popa, for the purposes of aliment. This milk, however, notwithstanding its inferiority in this respect, is said to possess properties which fully counterbalance this deficiency, being convertible, by solar inspissation, into a black gum, or extract, which is highly prized for its medicinal virtues, real or imaginary, especially as a topical application in affections of the pleura, or spleen. Such indeed is the estimation in which it is held, that it sells, in the valley of the Canca, at the high price of one dollar per ounce, or a doubloon per lb. Mr. Higson regards the tree known in the province of Chocò by the name of lyria as identical with the Palo de Vaca of the coast of Venezuela. Of the correctness of this opinion we have no data for forming a correct judgment, especially as he enters into no details, and gives no description. The following particulars respecting the popa are extracted from a portion of Mr. Higson's journal, given in the letter already quoted, and containing the account of his expedition about twelve miles up the river from Ysconde, in company with the alcaide and two other gentlemen, on the 7th of May, 1822, for the purpose of examining this tree (which he observes to have been very abundant in the province of Popayan) in the spot where it grows. This tree, he says, yields an abundance of sweet and aromatic milk, of the consistence of good cream, and so white as to mark any substance upon which it falls with a very durable white stain: it mixes readily either with water or with spirits, and forms with either an agreeable beverage. This milk constitutes, during the season in which it flows most abundantly, the chief subsistence, not only of the Indians and negroes, but also of the jaguars, whom instinct has taught to lacerate

the bark with their claws, and catch the delicious fluid as it trickles down. The Indians and negroes obtain it, as Humboldt states, by incisions made in the bark, which Mr. Higson describes as being of considerable thickness, externally of an ash, and internally of a clay-red colour. Its nutritive qualities, he observes, are fully proved by the improved condition of all who feed on it during the season: this fully coincides with Humboldt's account. Of this vegetable-milk Mr. Higson and his party drank several calabashes full, and were highly gratified with its taste. They then proceeded to cut down one of the trees, "the loftiest of the forest," as Mr. Higson says, in order to obtain specimens. The timber of this tree he describes as being "white, of a free grain," and well adapted for the manufacture of shingles. It had done blowing; but the blossoms, he was informed, were extremely showy, and, if we may judge from his account of the fruit, disposed in axillary racemes, or clusters. The fruit, he says, appeared to be about a month old, and grew in clusters, on short footstalks, from the axæ of the leaves; they were scabrous, and of the size of small nutmegs: these he regards as berries, and not drupes,—a conjecture which, if well founded, would mark a considerable difference between the tree of Ysconde (which is identical, he says, with that of the forests of the Eska, near Quibdo) and that of Venezuela. Another difference appears to exist in the admixture of a number of abortive fruits with the fertile ones in the branches, which seems to imply that the tree producing them was monœcious, or had distinct male and female flowers growing in the same cluster. The branches of the tree he describes as uniformly trichotomous, or divided into threes. The leaves had short footstalks, were coriaceous, hearted at the base, emarginate and pointed, covered over with a number of semiglobular glands; all which particulars mark a considerable difference from Humboldt's tree.

In speaking of the popa, we had nearly forgotten to notice one most valuable property of its milk, mentioned by Mr. Higson in his letter to Mr. Watts, namely, its forming, when boiled with the gum of the mangle-tree, (*sapium aucuparium?*) tempered with wood-ashes, a valuable glue, which is capable of resisting the effects of humidity.

A considerable number of plants of the Palo de Vaca were introduced into this country, a few years since, from the province of Venezuela, by a person of the name of Fanning; but they have all, as we have reason to believe, perished. More recently, the fruit has been sent to this country by Sir Robert Ker Porter; but from having been too long gathered before it was sent off, it does not promise to vegetate.



[Pericarp and Nut of the Palo de Vaca, or Cow-Tree of Venezuela, of the natural size; from Specimens received from Sir R. K. PORTER on the 17th of June, 1835. Equatorial diameter of the pericarp, two inches; polar diameter, one inch seven-eighths.]

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CAMBRIDGE.—No. I.



[Interior of King's College Chapel.]

CAMBRIDGE, the seat of one of the two celebrated English universities, is the county-town of Cambridgeshire. It is distant from London about fifty-two miles, in $52^{\circ} 13'$ north latitude. The external and internal appearance of Cambridge is far from being so attractive as that of Oxford*. The surrounding country for many miles is an uninterrupted level, with only a slight exception. The town is not, therefore, seen to much advantage from a distance; in addition to which, the buildings of the university are mostly embosomed in tall trees. The noble structure of King's College Chapel, the tower of St. Mary's, and the spire of Trinity Church, are indeed to be seen rising over every other object on all sides, but they are almost the only things which break the uniformity. Until very lately the town was badly regulated, the streets were narrow and dirty, and the public buildings of an unimportant character. Considerable alterations are, however, taking place. The river Cam, naturally a dull, sluggish, narrow stream, is undergoing considerable improvements, which are estimated to cost about 13,000*l.* or 14,000*l.* In 1827 an Act was passed, empowering the magistrates to expend 15,000*l.* in the erection of a new gaol; the bridges and quay belonging to the town, which have been much neglected, and are still far from being in a condition to reflect credit on the place, are attracting attention; and if other improvements are carried forward, such as the draining of the commons belonging to the corporation, and the proper paving and cleansing of the streets, as well as widening them, where that can be effected, they will give a new character to the town. It must be recollected, however, that Cambridge has had to struggle with many natural disadvantages.

The history of the town of Cambridge, as detached from that of the university, may be dismissed in a few words. It is generally understood to have been a Roman station; and in the map of Ancient Britain, published by the Useful Knowledge Society, it is set down as the *Camboritum* of Antonine and Ptolemy. The Roman road, known as the "Via Devana," passed by or through it. The town suffered considerably from the Danes, and was, it is supposed, occupied a long time by that roving people as a station. William the Conqueror built a castle here, on the site, it is said, of the Danish fortress, but if so, on a larger scale, as it appears that twenty-seven houses were destroyed to make way for it. In the record of Domesday the borough contained 373 houses, which number includes forty-seven then in ruins, and the twenty-seven which were destroyed. At that time the town belonged to the crown; but Henry I. granted it to the corporation, on condition of their paying the same rent which the sheriff had been accustomed to do, which grant was confirmed by King John.

Little business is carried on in Cambridge, except as connected with the university. There is an external trade, arising from its situation, it being connected with London and with Lynn Regis by inland navigation. Coal, corn, and oil manufactured from hemp, flax, and cole seed, are conveyed to it in large quantities. The trade in what is termed Cambridge butter is also carried on to a considerable extent. This butter is the produce not only of Cambridgeshire, but of the adjoining counties, and it is brought to the town principally for exportation.

A fair, which was formerly one of the largest, as it is one of the most ancient in England, is annually held at Cambridge. This is Sturbridge or Stourbridge fair. "We read," says Turner in his 'History of the Anglo-Saxons,' "of merchants from Ireland landing at Cambridge with cloth, and exposing their merchandise to

* See the account of Oxford in Nos. 165 and 182 of the 'Penny Magazine.'

sale." It was a great fair in Fuller's time, in the seventeenth century. The ground for this fair is annually marked out on the 4th of September by the mayor and aldermen; and the dealers are then at liberty to erect booths, arranged like streets. On the 18th of the same month the vice-chancellor, doctors, and proctors of the university, accompanied by the municipal authorities, proclaim the fair with considerable pomp, which then continues for two weeks. The principal commodities sold at it are wool, hops, leather, cheese, iron, &c.; and one day in particular is devoted to the sale of horses. There is also another fair held at Midsummer, called Midsummer Fair. Annual fairs, in our early history, were exceedingly useful in drawing people together at stated intervals for the exchange of commodities; but the facilities of communication which civilization has introduced have rendered them in many cases unnecessary.

Some notice of Hobson the carrier can hardly be omitted in an account of the town of Cambridge. The conduit erected by Hobson is near the market-place. The water is conveyed to this conduit from springs about three miles from the town, along a brook which is conducted beneath the principal streets by an aqueduct. The structure itself is of stone, decorated with rude carvings, with two inscriptions, the one recording its foundation and the death of the founder, January 1, 1630, the other memorializing a subsequent bequest by Edward Potts, formerly an alderman of Cambridge, of two tenements, the rents of which are to be applied towards the repairs of the same.

Milton was a student at Cambridge at the period of Hobson's death. Todd, in his edition of Milton's works, thinks that the death of the worthy but eccentric carrier was a common topic for the wits of the University, and Milton could not resist the temptation. He wrote two whimsical epitaphs on Hobson, in which he permits himself to indulge in the conceits and far-fetched allusions which his genius in its nobler flights despised, but which were then universally affected both in prose and verse. In the 'Spectator,' vol. vii., No. 509, is the following account of Hobson, and the origin of the proverb, "Hobson's choice—this or none."

"Mr. Tobias Hobson, from whom we have the expression, was a very honourable man, for I shall ever call the man so who gets an estate honestly. Mr. Tobias Hobson was a carrier; and being a man of great abilities and invention, and one that saw where there might good profit arise, though the duller men overlooked it, this ingenious man was the first in this island who let out hackney-horses. He lived in Cambridge; and observing that the scholars *rid* hard, his manner was to keep a large stable of horses, with boots, bridles, and whips, to furnish the gentlemen at once, without going from college to college to borrow, as they have done since the death of this worthy man. I say, Mr. Hobson kept a stable of forty good cattle, always ready and fit for travelling; but when a man came for a horse, he was led into the stable where there was great choice, but he obliged him to take the horse which stood next to the stable-door, so that every customer was alike well served according to his chance, and every horse ridden with the same justice: from whence it became a proverb, when what ought to be your election was forced upon you, to say, 'Hobson's choice.' This memorable man stands drawn in fresco at an inn which he used, in Bishopsgate Street [London], with an hundred-pound bag under his arm, with this inscription upon the said bag:—

'The fruitful mother of an hundred more.' "

The inn which Hobson is here described as having used was the Bull, in Bishopsgate Street.

Hobson died while the plague was raging in London; and it is in allusion to the supposition that the stoppage of his regular visits to the metropolis, and his consequent want of employment, had occasioned his death, that Milton says—

“Ease was his chief disease; and to judge right,
He died for heaviness that his cart went light:
His leisure told him that his time was come,
And lack of load made his life burdensome.”

Granger, in his ‘Biographical History of England,’ says,—“Hobson, the carrier of Cambridge, by the help of common sense, and a constant attention to a few frugal maxims, raised a much greater fortune than a thousand men of genius, educated in that University, ever acquired, or were even capable of acquiring. He was, to use the citizen’s phrase, ‘a much better man’ than Milton, who has written two quibbling epitaphs upon him. But if that great poet had never lived, his name would have been always remembered; as he took an effectual method of perpetuating his memory by erecting a handsome stone conduit at Cambridge, supplying it by an aqueduct, and settling seven leys of pasture-ground towards the maintenance of the same for ever. He died in the time of the plague, 1630, in the eighty-sixth year of his age.”

The “quibbling epitaphs” have contributed as much to Hobson’s fame as the conduit, notwithstanding its utility; and doubtless the honest carrier himself would have demurred at being counted a “better man” than Milton, even with the help of his money. Peck, at the end of his ‘Memoirs of Cromwell,’ has printed Hobson’s will, which is dated 1630.

Cambridge takes its name from the modern appellation of the river, the Cam, the ancient name of which was Granta. In Domesday book the town is called Grentebidge. It is a borough by prescription, governed by various charters granted by different monarchs, the earliest of which is dated 1102, being the second year of Henry I. The borough, which is also called the Liberty of Cambridge, extends over fourteen parishes, and embraces a considerable quantity of land employed in agriculture. The limits of the parliamentary borough were not disturbed under the Reform Act. The town returns two members to Parliament, in addition to the two returned by the University. Under the Municipal Reform Act, the borough is divided into five wards, with ten aldermen and thirty councillors.

The following is a brief summary of statistical information respecting Cambridge, taken from the Municipal Corporation Report:—

The number of statute acres of land within the borough of Cambridge is 3196.

The population in 1801 was 10,087; in 1811 it was 11,108. Both of these statements do not include the members of the University, but in the two following periods they are included. In 1821 the population was 14,142; in 1831 it was 20,917. In the last census 10,143 were males, 10,774 females.”

The number of families employed in agriculture was 253; in trade and manufactures 2232; and the number not comprised in either class was 1837.

The annual value of real property in 1815 was 31,150*l.*: it has since increased, but the exact amount is not stated.

The number of houses rated at 10*l.* and under 20*l.* are stated at 675; 20*l.* and under 40*l.*, 529; 40*l.* and upwards, 230: total, 1434.

Allusion has been made, in the account of Oxford, to the ridiculous fables which men, not destitute of common sense on other subjects, have put forward respecting the antiquity of the two Universities. In the following anecdote, if we could suppose the parties

engaged to be carrying on a grave piece of pleasantry, we might smile at the absurdity of the thing; but they were very probably in earnest.

In the year 1564 Queen Elizabeth came to Cambridge, when she was entertained by the University with as much variety and splendour as their means would then allow. On this occasion the public orator, in addressing her majesty, embraced the opportunity of extolling the antiquity of the University to which he belonged above that of Oxford. This made Thomas Key, or Caius, master of University College, Oxford, to compose a small treatise on the antiquity of his own university, which he referred to the fabulous period when the Greek professors accompanied Brute to England; and also to the year 870, when science was invited to the banks of the Isis under the auspices of the great Alfred. A manuscript copy of this production came accidentally into the hands of the Earl of Leicester, from whom it passed into those of the celebrated Dr. John Caius, of Cambridge, who, resolving not to be vanquished in asserting the chronological claims of his own university by his namesake of Oxford, undertook to prove the foundation of Cambridge 400 years before the Christian era. This, of course, brought out a rejoinder from the Oxonian, which was afterwards published by Hearne, the antiquary, who boasts that it completely extinguishes the Cambridge man.

A passage in the writings of the Venerable Bede has been commonly referred to as a proof that a school of learning was founded at Cambridge during the Saxon era. Nothing, however, can be gathered from this passage, beyond the general fact that a school was founded somewhere in the present counties of Cambridge, Norfolk, or Suffolk, and that it might have been at Cambridge. It is not to be questioned that a few ecclesiastics were settled here during a portion of the Saxon era; and as ecclesiastics were the sole depositories of whatever learning then existed, and were the teachers of youth, something of the nature of a school might have been established. Fuller, in his quaint style, remarks, that where “Mars keeps his term, there the Muses may even make their vacation;” and this is strikingly true when applied to the state of England prior to the Norman Conquest. We are told by Turner* that “at the period of the Norman Conquest almost all sort of learning had almost vanished out of our island. Such was the state of its most intellectual body, the ecclesiastic, that we find it declared that the studies of learning and religion had become obsolete; the clergy, contented with a disorderly literature, could scarcely stammer out the words of their sacraments; it was a miracle to the rest if any of them knew grammar. The Anglo-Saxon monks are described to have been stupid and barbarous, living like the laity; following hounds and falcons, racing with horses, shaking the dice, and indulging bacchanalian jovialities where they had the means, and in other places existing in the most sordid poverty. Even the archbishops and bishops in the time of the Confessor are noticed to have been illiterate and sensual men.” Fuller—himself a Cambridge man, and not likely to abate a jot of the honour due to his alma mater†, while he asserts that the foundation of the university was “far ancients” than the Norman conquest, admits that what is reported of it before that period is “both little and doubtful.” Hallam (Middle Ages, vol. iii. p. 527, note) says, “The earliest authentic mention of Cambridge as a place of learning, if I mistake not, is in Matthew Paris, who informs us that in 1209 John having caused three clerks of Oxford

* England in the Middle Ages, vol. iv. p. 147.

† *Alma mater*, two Latin words, signifying nourishing or fostering mother, and generally applied by students to their universities.

to be hanged on suspicion of murder, the whole body of scholars left that city, and emigrated, some to Cambridge, some to Reading, in order to carry on their studies. But it may be objected, with some probability, that they were led to a town so distant as Cambridge by the previous establishment of academical instruction in that place. The incorporation of Cambridge is in 1231 (15th Henry III.), so that there is no great difference in the legal antiquity of our two universities." Mr. Malden, in a little book recently published on the 'Origin of Universities,' says that "the tradition of the origin of the University of Cambridge is of so very unpretending a character, that though the external evidence for it is not very strong, it may fairly be left to stand on its own probability." The substance of this tradition is, that in 1109, an exact century prior to the date in Matthew Paris, the abbot of Croyland sent monks to his manor of Cottenham, who repaired daily to Cambridge, and from their manner of lecturing and giving instruction, acquired great popularity, and drew a concourse of people after them. Turner, in his sketch of the revival of literature, and establishment of schools, after the Norman conquest, thus describes this event:

"On Ingulph's death, [he was abbot of Croyland, and, amongst other works, author of a history of his monastery,] Joffred was invited from Normandy, and appointed abbot of Croyland. When he settled in the monastery, he sent to its farm, near Cambridge, four Norman monks, who were well instructed in what was then called philosophy and science. With all the zeal, and in the manner of our modern itinerant preachers, they hired a public barn at Cambridge, and went thither daily, and taught what they knew. In a short time a great concourse of pupils gathered round them. In the second year of their exertions, the accumulation of scholars from all the country round, as well as from the town, was so great, that the largest house, barn, or even church, was insufficient to contain them. To gratify the extensive demand for their instructions, they separated their labours. In the first part of the morning, one of the friars, who was distinguished as a grammarian, taught the Latin grammar to the younger part of the community; at a later hour, another, who was esteemed an acute sophist, instructed the more advanced in the logic of Aristotle, according to the comments of Porphyry and Averroes; a third friar lectured on rhetoric, from Cicero and Quintilian; the fourth, on Sundays and feast-days, preached to the people in various churches; and in this duty Joffred himself frequently co-operated."

Mr. Malden, in the book from which we have already quoted, says, "Mr. Dyer states that he finds the term university applied to Cambridge in a public instrument of 1223. According to Mr. Hallam, the date of its first incorporation is the 15th of Henry III., or 1231. [This is the date commonly assigned in the books.] In Hare's Register of the Charters and other monuments of the liberties and privileges of the university, which is the authority on which the university relies, there is no charter of incorporation of this year, nor indeed any of this monarch; but there are many public letters of Henry relating to the university, the earliest of which are of the date mentioned by Mr. Hallam. These fully recognize the existence of the university, and of its masters and chancellor; the authority of the chancellor and masters, and some customs and privileges of the university. It is probably, therefore, to these documents that Mr. Hallam refers, as implying an incorporation, or he may have been misled by an inaccurate description of them. One of the most important of these early monuments is a royal letter addressed to the sheriff of the county (*vice-comes*), calling upon him to 'repress the insubordination of the clerks and scholars, and to

compel them to obedience to the injunctions of the bishop of Ely, either by imprisonment or banishment from the university, according to the discretion of the chancellor or masters."

From the foregoing, it would appear that the common statement of the first charter having been granted to the University by Henry III. is a mistake. What is thus called a charter, is a royal letter, directing that lodgings for the students, or hostels (*hospitia*), shall be taxed (*i. e.* valued), "according to the custom of the University, namely, by two masters and two respectable and lawful men of the town, and let to the scholars according to their valuation." This order was renewed in letters patent of the 50th of the same king, with the addition, that the valuation was to be repeated every five years. Mr. Malden, in speaking of universities generally, says, "The great concourse of students in the early universities made it difficult for them to obtain lodgings, and the citizens of course demanded for their lodgings very high prices. To remedy this inconvenience, recourse was had to somewhat arbitrary expedients. Frederick II., when he founded his university at Naples, fixed a maximum price for lodgings, and enacted besides, that all lodgings should be let according to the joint valuation of two citizens and two scholars. The latter regulation was in force in the English universities. At Bologna, in like manner, four taxors were appointed to regulate the price of lodgings. Elsewhere it was provided, that when a scholar had once hired lodgings he should not be disturbed in the possession of them as long as he paid his rent. But, in spite of all such arbitrary regulations, it is manifest that the more celebrated and the more frequented any university was, the greater would be the demand for lodgings, and the higher the price of them. This pressure upon the poor students excited charitable benefactors to relieve it in a more effectual manner. The religious orders first established, in several university towns, hostels (*hospitia*) for those of their members who resorted thither either as teachers or learners. The example was followed by individuals; and houses were provided, in which poor students enjoyed the benefit of free lodgings. For the sake of discipline, these foundations were placed under the superintendence of one or more graduates; and these masters assisted and instructed their pupils, but only in subservience to the public lectures and exercises of the University. Such establishments were called inns, hostels, halls, or colleges."

In Fuller's 'History of the University of Cambridge,' appended to his 'Church History,' is the following account of the occasion which called for the interference of Henry III. The pithy loquacity of Fuller is amusing and instructive:—

"1231. The townsmen of Cambridge began now most unconscionably to raise and rack the rent of their houses wherein the scholars did sojourn. Every low cottage was high valued. Sad the condition when learning is the tenant, and ignorance must be the landlord. It came at last to this pass, that the scholars, wearied with exactions, were on the point of departing to find a place where they might be better accommodated on more reasonable conditions. Here the king seasonably interposed his power, appointing that two masters of arts and two honest townsmen should be deputed as chancellors, conscientiously to moderate the rigour of covetousness. And seeing scholars would hire as cheap, and townsmen would let as dear as they could, the aforesaid four persons (indifferently chosen out of both corporations) were to order the price betwixt both, according to the tenour of the king's letter. * * * This was the first original of the taxatores, or taxers, in Cambridge, so called, at first, from taxing, pricing, or rating the rents of houses. Their name



[Bridge, connecting the Colleges of Old and New St. John's]

remains, but office is altered at this day. For after the bounty of founders had raised halls and colleges for scholars' free abode, their liberality gave the taxers a writ of ease, no more to meddle with the needless pricing of townsmen's houses. However, two taxers are still annually chosen, whose place is of profit and credit, as employed in matters of weight, and to see the true gauge of all measures, especially such as concern the victuals of scholars. For where the belly is abused in its food, the brains will soon be distempered in their study."

In the year 1174, about sixty years after the period to which tradition refers the first establishment of a school at Cambridge, there occurred a great fire, which consumed the chief part of the town. It appears that the churches were built of wood, which accounts for the extent of the conflagration. Cambridge then would be like what some Russian towns are now.

The privileges assumed by or granted to the ecclesiastics created great dissatisfaction in the minds of the inhabitants of Cambridge, and laid the foundation of that old grudge which is preserved to our day in the

cry of "town and gown," and occasionally provokes a riot with the thoughtless or mischievous portion of the townfolk and the equally thoughtless or mischievous portion of the students. The heartburnings engendered by the discontents at the privileges of the ecclesiastics manifested themselves on various occasions, and compelled the scholars to resort to the assistance of the civil power. It is not at all unlikely that the townsmen were unfairly dealt with. They complained of various exactions, one of the most oppressive of which was termed "candle-rents," and was probably a tax to provide candles for the altars of the numerous religious establishments of the place. The most serious of the riots between "town and gown" occurred in 1381, the year after the outbreak of Wat Tyler and his followers, on which occasion the townsmen seized the charters and documents belonging to the University, burned them in the market-place, and committed much other mischief. The timely arrival of Spencer, "the warlike Bishop of Norwich*," with a body of troops, put a stop to the further proceedings of the mob; and the town suffered for it afterwards in the loss of its chartered privileges, which were transferred to the University. These privileges were partially restored by Henry VIII.

It is stated by Mr. Malden that the first formal charter to the University of Cambridge which is extant was granted by Edward I., in the twentieth year of his reign. Charters more and more ample were granted by Edwards II. and III., Richard II., and Henry IV. These charters were confirmed by Edwards IV. and VI., and by Elizabeth; and they were finally ratified by the Act of Parliament 13th Eliz., c. 29.

It may be useful here to give a brief explanation of the meaning of the words university and college, and also a slight sketch of the origin of universities. The authorities followed are the 'Edinburgh Review' and Malden's 'Origin of Universities.'

Universities arose during the twelfth and thirteenth centuries. Certain places or towns becoming celebrated as being the abode of some clever ecclesiastic or ecclesiastics, who drew people after them, especially youth, to receive their instructions, other ecclesiastics followed, who also opened schools, and many of the pupils taught by the original teachers became the teachers of others, thus multiplying the number of schools in the place. It has been supposed that universities are so called because they profess to teach *universal* learning. This is a mistake. It appears that in the language of the civil law all corporations were called *universitates*, as forming one whole out of many individuals. In the German jurisconsults *universitas* is the word for a corporate town. In Italy it was applied to the incorporated trades in the cities. As applied, therefore, to the schools which had become numerous in a town, it meant that they were formed into a connected and organised body. In later times the word has been restricted to signify those seats of learning which possess the power of granting degrees.

Colleges are incidental things arising out of the establishment of universities. When a town, such as Oxford or Cambridge, became celebrated as a place of instruction, and received favours and privileges, it would, of course, become more and more a place of resort, especially as learning was patronized and fashionable. The different monasteries used to send some of their members to these towns, some to be taught, others to share in the labour and profit of teaching. To keep these members as much as possible in the same way as they lived in the monasteries, separate and secluded, hostels or *hospitia* were established, in which the members of the monastic bodies residing at the

* For a brief notice of this prelate, see No. 198, p. 170, of the 'Penny Magazine.'

universities lived under the care of a head or principal. Many young men resorted to the universities, ambitious of acquiring instruction, but often without the means of paying for it, or of supporting themselves while residing there. Others who were able to pay moderately, found it impossible to do so, on account of the high charge for lodgings, caused by the flocking together of so many people. Again, parents or guardians of a pious frame of mind, who could pay for the education of their charges, were yet anxious to keep them from the corruption and violence engendered in a place where so many of different dispositions and tempers were to be met with. This led to the foundation of hostels or *hospitia*, similar to what the monks had established, and benevolent individuals endowed them with sums of money and otherwise, by which poor scholars were enabled to procure education and lodging either wholly or partially free. These establishments were placed under the superintendence of heads or masters, and were called inns, hostels, halls, or colleges, though the latter name became generally restricted to such foundations as were endowed with money to support teachers as well as learners.

A university may thus be a university whether it possess colleges or not. Colleges are incidental to a university. In Scotland the words university and college have come to be used synonymously, even in public documents. The cause is principally this:—in the old time, the students who resorted to the Scotch universities were poorer and fewer in number than those who resorted to the English universities. Hence the teachers or professors, instead of finding their vocation a profitable one, could hardly support themselves; and it became necessary to provide for the support of professors, independently of fees or emoluments to be derived from the students, otherwise the universities would virtually have ceased to exist. The only colleges founded in the universities of Glasgow, St. Andrews, and Aberdeen were for the exclusive support of the teachers—the principals and professors—and not for the students. In these universities the students still live, as the students did originally in Oxford and Cambridge, in their own private lodgings, at their own expense, and without control from the professors. The same thing is the case in some of the German universities, at least nearly so. "In Germany the name of college was usually applied to foundations destined principally for the residence and support of the academical teachers; the name of *Bursa* was given to houses inhabited by students under the superintendence of a graduate in arts. In the colleges, which were comparatively rare, if students were admitted at all, they received free lodging or free board, but not free domestic tuition; they were bound to be diligent in attendance on the lectures of the public readers in the university; and the governors of the house were enjoined to see that this obligation was faithfully performed. The *Bursæ*, which corresponded to the ancient halls of Oxford and Cambridge, prevailed in all the older universities of Germany. They were either benevolent foundations for the reception of a certain class of favoured students, who had sometimes also a small exhibition for their support, or houses licensed by the Faculty of Arts, to whom they exclusively belonged, in which the students admitted were bound to a certain stated contribution to a common exchequer (*bursa*—hence the name), and to obedience to the laws by which the discipline of the establishment was regulated*."

In the Scottish universities there are small endowments for the benefit of poor students, called bursaries; but as they are paid in money, and no foundations exist for the reception of students, in which they may be either wholly or in part subject to discipline or control, beyond attendance on the lectures of the profes-

* Edin. Rev., No. 106, p. 403.

sors, it does not alter the statement by which it is explained how university and college have become synonymous in Scotland. As already mentioned, the three universities of Glasgow, Aberdeen, and St. Andrews have each only one college for the support of the principals and professors, while the University of Edinburgh has no college at all answering to the English meaning of the term.

But the great peculiarity of the English Universities of Oxford and Cambridge is in their colleges and halls. These, by endowments and gifts, have become immensely rich, while the universities to which they belong have remained comparatively poor. "It is commonly supposed, on account of the rich endowments of the colleges in the English universities, that the universities themselves are rich. But the universities, as corporations, possess very little property besides their libraries and museums, and their few public buildings; and of these the most important have been raised, either by the munificence of individuals, as the Ratcliffe Library and the Theatre at Oxford, or by subscription, as the Senate House and the Pitt Press at Cambridge. Where estates have been bequeathed to the Universities, their proceeds have been almost always appropriated to special purposes, such as the endowment of certain professorships, or the augmentation of the libraries. In the 16th and 17th of Henry VI. certain manors were granted to the University of Cambridge, by letters patent, for the perpetual maintenance and repair of the public-schools. In the latter year, A.D. 1438, both universities presented petitions, which were backed by a royal letter, to the synod of the province of Canterbury, praying for a provision for the relief of poor students out of the patrimony of the church."*

The origin of degrees is involved in a little obscurity. The terms "master" and "doctor" were originally applied to persons engaged in teaching. The term "professor," though less frequent in early times, had the same signification: it meant a person who professed to teach any particular subject. When the teachers of different schools made regulations among themselves, which were subsequently confirmed by public authority, to prevent unqualified persons from assuming their office; or when similar regulations were enforced by the ecclesiastical dignitaries who had the charge of such schools, the term "master" and "doctor" and "professor" became titles, signifying a certain rank, and conveying certain powers in the scholastic body: but still they were given only to persons who were admitted by competent authority to the office of teachers. The appellations "master" and "doctor" were at first used synonymously; and it was only in process of time that the name "master" came to be restricted more peculiarly to the teachers of the liberal arts, and the title of "doctor" to be assumed as a distinction by the teachers of theology and law, and subsequently of medicine. Master was a general title; doctor a special; all doctors were accounted masters, though all masters were not doctors. The phrase "masters and scholars" is the general description, or corporate name, in which all members of the university are included, whether at Paris, or Oxford, or Cambridge. When the titles of doctor and master were distinguished, and more especially when an earlier stage in the probation was marked by the name of bachelor, these successive designations were called *steps* (*gradus*) or degrees. (Hence graduates.) By a gradual change they ceased to imply actual teaching, and became mere titles of honour.

The term professor has continued in common language to be applied only to those who are actually engaged in teaching, or whose official business is to teach. In the English universities the Latin designa-

tion of a doctor of divinity is "*sanctæ theologiæ professor*"—professor of sacred theology.

A degree originally was a license to teach; afterwards it implied an obligation to teach. The technical term signifying to teach in the public-schools was *regere*; and the master of arts, or the doctor of any faculty, upon his creation, necessarily became a *regent*, that is, a teacher in the schools. This is the mode in which instruction was given in the earliest age of universities. Out of this number of rival teachers the students made their choice, but they were expected to attach themselves to some one in particular. But those who took degrees, and began to teach, were not bound to continue teaching all their lives. A period of necessary regency was established, differing in different universities, during which the graduates were bound to teach, after which they might, if they chose, become *non-regents*. Thus the early universities at their earliest period were taught by their graduates at large; and it was only by a slow change that this practice fell into disuse. The chief cause of its discontinuance and final cessation was the general appointment of public and authorized professors and lecturers. These were sometimes appointed by the government, sometimes by the university; sometimes they were left, like other teachers, to collect fees from their pupils, more commonly they received a fixed salary, paid by government, or from the endowments of private munificence.

In all universities the chancellor was the "fountain of honour,"—the officer by whose authority degrees were conferred; and this dignity gave considerable power. In France and Italy, where schools had been attached to collegiate churches, there was usually a member of the college or chapter who was called *scholasticus*, originally, we may suppose, the schoolmaster. Where universities grew out of such schools, the *scholasticus* not unfrequently became the chancellor. The bishop of the diocese was very often the chancellor, especially where the University was placed in an episcopal city; and if not the bishop, some other ecclesiastical dignitary. In England it happened fortunately for the Universities that neither Oxford nor Cambridge was a bishop's see, nor were the early schools connected with any ecclesiastical body. It came to pass, therefore, that, by immemorial custom, they elected their own chancellors. The chancellors combined the offices which in the continental universities were divided between the chancellor and the rector, and consequently were strictly connected with their universities, instead of standing in the relation of a distant superior exercising an occasional and appellative jurisdiction. No layman, however, was elected chancellor until the Reformation.

The authority of the Bishop of Ely over the University of Cambridge was early recognized; but it was soon limited, partly from the concessions of the bishops themselves, and partly by papal authority. Hugh Balsham, bishop of Ely, who, in the beginning of the reign of Edward I., under the authority of a royal charter and a papal bull, turned a religious house into a college*, disclaimed by public letters all wish of derogating from the privileges of the University, or disturbing the jurisdiction of the chancellor, but required all suits to be brought before the chancellor in the first instance, restricting himself to receiving appeals. In the 36th of Edward III. (1361 or 1362) letters patent were granted, by which the scholars were protected from being summoned out of the University into any ecclesiastical court. In the 15th of Richard II. the Bishop of Ely was forbidden by royal letters from transmitting citations, so as to impede the liberty of the University in the cognizance of pleas. Though the University elected its chancellor and other principal officers, the confirmation of the Bishop of Ely was anciently re-

* Malden, Origin of Univ. p. 107.

* St. Peter's College, the oldest existing foundation in the University of Cambridge.

quired. But this confirmation was dispensed with by a bull of Pope Boniface IX., in the second of Henry IV., A.D. 1401. In 1430, Pope Martin V. commissioned certain delegates to inquire if the University, by grant or custom, was subject to the ecclesiastical jurisdiction of their chancellor, and exempt from that of all others, empowering them, if they should find it so, to confirm the exemption by his authority. The sentence of the delegates, which was in favour of the University, was confirmed in 1433 by a bull of Pope Eugenius IV.*

The legal style of the university is that of a society of students in all and every of the liberal arts, incorporated (13 Eliz. c. 29) by the name of "The Chancellor, Masters, and Scholars of the University of Cambridge." The university contains seventeen colleges or halls, founded since the beginning of the reign of Edward I., and which are maintained by the endowments of their several founders and benefactors. Each college is a body corporate, bound by its own statutes, but controlled likewise by the paramount laws of the university. The present university statutes were given by Queen Elizabeth, and, with former privileges, sanctioned by Parliament. It may be proper to state that college and hall are synonymous at Cambridge, though not so at Oxford. Each of the seventeen departments or colleges of the University of Cambridge furnishes its own members, both for the executive and legislative branch of its government. The place of assembly is the Senate House.

The executive government of the University is committed to a chancellor, who is the head of the whole University, and presides over all cases relating to the body; a high steward, who has special power to take the trial of scholars impeached of felony within the limits of the University†, and who appoints a deputy by letters patent; a vice-chancellor, who is elected annually on the 4th of November by the senate, who must be the head of some college, and during his continuance in office acts as magistrate for the University and county; a commissary, who is an officer under the chancellor; a public orator, who is the voice of the senate upon all occasions, writes, reads, and records the letters to and from the body of the senate, and presents all honorary degrees with an appropriate speech; the assessor, an officer specially appointed to assist the vice-chancellor in his court; two proctors, who are peace-officers, elected annually, who are assisted by two pro-proctors; two taxors, who must be masters of arts, and are regents by virtue of their office; three esquire beddells, whose office is to attend the vice-chancellor, whom they precede with their silver maces upon all public occasions and solemnities; with a number of other officers.

All persons who are masters of arts, or doctors in one or other of the three faculties, divinity, civil law, or physic, having their names upon the college-boards, holding any university office, or being resident in the town of Cambridge, have votes in the senate. The senate is divided into two classes or houses; and, according to this arrangement, they are denominated regents or non-regents, with a view to some particular offices allotted to the junior division by the statutes of the University. Masters of arts of less than five years' standing, and doctors of less than two, compose the regent or upper house, or, as it is sometimes called, the white-hood house, from its members wearing their hoods lined with white silk. All the rest constitute the non-regent, or lower house, called also the black-hood house, from its members wearing black silk hoods. But doctors of more than two years' standing, and the public orator of the university, may vote in either house according to their pleasure.

Besides the two houses, there is a council called the *Caput*, chosen annually upon the 12th of October, by

* See Professor Malden's interesting little book, to which we have already repeatedly referred.

† The jurisdiction of the University is a mile every way round.

which every University grace must be approved before it can be introduced into the senate. The *Caput* consists of the vice-chancellor, who is a member of it by virtue of his office, a doctor of divinity, of civil law, and of physic, and two masters of arts, who are the representatives of the two houses.

An assembly of the Senate is called a Congregation.

The University confers no degree whatever unless the candidate has previously subscribed a declaration that he is, *bonâ fide*, a member of the Church of England as by law established.

The two members whom the University sends to parliament by virtue of a charter granted by James I. in the first year of his reign, are chosen by the collective body of the senate.

The annual income of the University chest, is about 16,000*l.*, including about 3000*l.* of floating capital, arising from stock in the funds, manors, lands, profits of printing, &c. The annual expenditure is about 12,000*l.* The whole is managed by the vice-chancellor, and the accounts are examined by three auditors, appointed annually by the senate.

The terms of the University are three, viz., Michaelmas Term, from 10th October to 16th December; Lent Term from 13th January to the Friday before Palm Sunday; Easter Term from the eleventh day after Easter Day to the first Tuesday in July.

The different orders in the several colleges are,—1. Heads of colleges. The head of King's College is styled Provost; of Queen's, President; all the rest are Masters. 2. Fellows. The number of fellowships in the University is 430. 3. Noblemen graduates, doctors, bachelors in divinity, and masters of arts, whose names are kept on the boards, (though they are not on the foundation,) for the purpose of having a vote in the Senate. The expense of keeping the name on the boards varies in some colleges, but is in general about 4*l.* per annum. 4. Graduates. 5. Bachelors in civil law and physic. 6. Bachelors of Arts. 7. Fellow-commoners, who are generally the younger sons of the nobility, or men of fortune, and have the privilege of dining at the fellows' table. 8. Pensioners and scholars, who pay for their respective commons, rooms, &c. 9. Sizars, generally men of inferior fortune, who usually have their commons free, and receive various emoluments.

The following summary, taken from the 'Cambridge Calendar for 1836,' exhibits the names of the different colleges of the University, and the present number of members:—

	Members of the Senate.	Members on the Boards.
Trinity College	817	1658
St. John's College	527	1076
Queen's College	117	358
Caius College	115	282
Christ's College	105	242
Emmanuel College	112	217
Corpus Christi College ..	90	214
St. Peter's College	95	200
Magdalene College.....	77	188
Catharine Hall	71	186
Clare Hall	82	168
Jesus College	72	163
Pembroke College	53	136
Trinity Hall	45	128
King's College	83	112
Sidney College	52	87
Downing College	28	52
Commorantes in Villa	11	0
	2552	5467

It appears from the last 'Oxford Calendar' that the total number in that University is 5154, consequently Cambridge has a majority of 313 members. The increase in this University since last year is sixty-eight.

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THE VINTAGE.



[Wine-making at Pola.]

IN the announcements put forth by wine-merchants and wine-dealers, it is generally stated that their stock contains wine of superior quality,—of the vintage of 1811 or some other particular year,—and a higher price is affixed to it than to that which is of ordinary growth. The superiority is occasioned by a peculiarly favourable season, when the grape being brought to the highest state of perfection, the produce possesses qualities which in average seasons it does not contain, and the grower and dealer are each justified in demanding a higher price for it. The produce of the same vineyard will sometimes be worth 16*l.* and in another year will fetch 120*l.*, according as the season has been more or less propitious.

We shall state some of the chief causes which concur in producing a superior vintage. A rather severe winter may be reckoned one of them, as the insects with which the vine is liable to be infested are then destroyed. If heavy rains precede the frost, more harm than good is done to the plant. A mild and rather moist temperature is desirable in spring, but much rain renders the labour of the vineyard more difficult, and

multiplies noxious insects. The period of blossoming is at the latter end of spring and commencement of summer, during which a temperature dry but not too hot is the most favourable, especially if followed by a fine warm summer. Immediately after blossoming, however, and also when the fruit is about to turn, light rains are essential, and in both cases it is of great consequence that they should be succeeded by a few cloudy days; for, after blossoming, a hot sun causes the fruit to fall, and, at the subsequent period, shrivels it up, and renders the production of wine of good quality altogether impossible. The commencement of autumn should be dry and warm, and at this period much rain would entirely destroy the flavour of the grape, even if the preceding season had been highly favourable. Slight frosts are useful just previous to the commencement of the vintage.

Many strangers arrive in the wine districts from other parts of the country to take part in the active labours of this period, and, as in the case of the Irish who visit England during the corn-harvest, the services of these strangers are of the greatest importance. In some parts

of France, where an extra supply of labour is not at hand to meet the emergency, the authorities interpose and regulate the period in which the vintage shall commence in each of the neighbouring communes. Such a regulation, however, must frequently operate with great hardship on individuals. It is now proved beyond a doubt that the assistance afforded by the Irish during the harvest in this country supplies a temporary deficiency of labour at a period the most important of all to the agriculturist and to the community generally.

Just before the vintage commences, the wine-presses and the vessels of various kinds are washed several times with cold water, and after having thoroughly drained, they are sponged with brandy of good quality. The barrels are scalded and immediately set to drain, and after being rinsed out with a glass of brandy and carefully bunged, are placed in the cellar.

The manner in which the labours of the vintage are conducted is usually as follows:—The grapes are gathered by women and children, and placed in baskets after the bad and unripe fruit has been picked carefully out. One picker is allotted to each row of vines, and to every twelve rows there is an overlooker, whose duty it is to see that the work proceeds in a proper manner, and that none of the grapes are left ungathered. To every eight rows there are two *baste* carriers. The *baste* is a small tub used in conveying the fruit to a large cask, which is placed in a cart or waggon. When the picker has filled a basket it is received by a basket-emptier, who takes it to the *baste*, into which the contents are emptied. The *baste*-carrier then treads the grapes, taking care not to crush them too much, so that the liquor may not be spilled in carrying. When the *baste* is nearly filled, the bearer places it on his shoulder, on a sort of cushion of twisted straw, and takes it to the cask in the cart, when it is emptied. Another method pursued is to empty the baskets at once into the cask on the waggon. The grapes are then trodden under foot, as is represented in the accompanying illustration, and a hole being cut in the side of the cask, the liquor issues through it as the treading proceeds, into a tub below, from which it is taken in buckets and conveyed to the tuns. It is recommended that the filling of a tun should be begun and finished in the same day, especially when the weather is warm and the grapes thoroughly ripe. If the tuns be filled too full there is a risk of losing a considerable quantity during fermentation: a space of from fifteen to eighteen inches should be left empty.

The grapes are frequently stripped from the stalk with rakes, but the preferable mode is to rub them over a wire, the frame of which is supported on four legs, and forms a table with a hollowed top. By this plan it is much easier to pick out the fruit which is bad.

Instead of the grapes being trodden down in a large vessel, as represented in the cut, they are sometimes at once taken to the wine-press. This press is from eight to nine feet square in the inside, and made of four oaken planks, of fifteen or sixteen inches in depth. The entire press is raised twenty-six or twenty-eight inches from the ground, and is set up so that there may be a slight inclination in front; and it is supported on strong joists, which are set in masonry. The construction of many of the wine-presses is extremely defective.

The wine is kept in the tun during a period varying from eight to twenty days, as the temperature may be more or less warm, or the fruit have been in a more or less mature condition.

Several descriptions of wine are made from the same gathering of fruit: usually two or three. The first is obtained from the grapes which have grown in the most favourable aspect, and are of the finest flavour. The second is from grapes of inferior quality, which

have grown in a moist soil or not been sufficiently exposed to the sun. A third description is made from the liquor at the bottom of the tuns, called *piquette*, and is very weak in quality, being to good wine what small beer is to strong ale.

The following method is adopted in filling up the casks in the cellar, where they are arranged. An estimate is made of the quantity contained in the first tun to be racked off, and the contents are then distributed in equal quantities to as many casks as it is computed the entire gathering will fill. A wire sieve is placed under the tap, to prevent the stones of the fruit or any extraneous matter falling into the tub in which the wine flows. When the running appears to get thick, the tap is turned; and in filling the casks care is taken to prevent the liquor contained in the lower part of the tuns from being mixed with that which flows when it is first tapped. The wine which is obtained by subsequently tapping the tuns is of inferior quality. *Piquette* is made from the refuse which remains in the tuns after they have been, to a considerable extent, drained off, and water put in every three or four days during fermentation. After it has fermented during fifteen or sixteen days, more water is added, care being taken not to introduce so much as will check the fermenting process. This is again left for fifteen or twenty days, and afterwards *piquette* of still inferior quality to that previously obtained is then made. The refuse of the fruit is then taken out of the tuns, and they are carefully cleansed.

During the month following the running off the wine, it is necessary to fill up the casks every three or four days with wine of the same quality as that which they already contain; during the second month, every eight days; and afterwards, every twelve or fifteen days, till the last drawing, which takes place about the end of March. The wines are racked off twice a year, in the months of March and October.

The above information is chiefly gathered from a report made to the Academy of Bordeaux on the cultivation of the vine and on wine-making. This notice may be seen in Dr. Bowring's Commercial Report on the Intercourse between England and France.

A REMARKABLE CHARACTER.

[From a Correspondent.]

ABOUT the commencement of the last century was born in the parish of Linkinhorne, near Callington, Cornwall, Daniel Gumb, who was bred a stone-cutter, but who, from the singularity of his life, acquired the appellation of the Mountain Philosopher. In his early years he was remarkable for a great desire for reading, and for a degree of reserve which characterised studious habits. By close application during vacant hours, he acquired some share of mathematical knowledge; through exaggerated estimates of which he became celebrated among the inhabitants of the surrounding parishes. Being adverse to the payment of rent, rates, and taxes, when they could be fairly avoided, he selected a retreat beyond the reach of landlords and assessors. As his employment called him to hew blocks of granite or moorstone, in the vicinity of that natural curiosity the Cheesewring (of which a plate was given at page 28, in our No. for January, 1836), and as he was not very particular about the luxuries of personal accommodation, he fixed upon this spot as congenial to his wants and wishes, to furnish him with a future abode. Discovering, on the southern side of the mountain, an enormous slab of granite, the upper surface of which was an inclined plane, it struck him that this might be made the roof of a habitation which would suit his purpose; being sufficiently secluded from the busy haunts of men to enable him to pursue his meditations without

interruption, while it was contiguous to the scene of his daily labour; and above all, as it promised him an exemption from rent, rates, and taxes. Fixed in his determination, Daniel excavated with painful caution the materials beneath his proposed roof, and supported its extremities with walls, cutting a small channel round its upper surface, near the edge, to receive the supplies of rain. A perforation through the mass served him for a chimney, which he was fully assured would never take fire. Shelves were set up on supports of wood or iron, inserted in horizontal directions into the huge granite rocks which encompassed the cavern, and a garden of small dimensions was enclosed and laid out in its front.

As soon as this singular mansion was completed, Daniel brought home his bride, who blessed him with a numerous progeny, all born and reared in this freehold tenement. From the summit of the hill he could command a view of Dartmoor and Exmoor on the east, Hartland and the nearer points of Roughtor and Brown Willy on the north and north-west; Roche Rock, Hensburrow, and the Deadman Point on the west and south-west; and a large extent of the English Channel, with Mount Edgcumbe and Plymouth towards the south; together with a great variety of intermediate scenery in these different directions. This also served him for an observatory, whence he surveyed the motions of the heavenly bodies; carving a diagram or two on the rocks, calculated to display his real or supposed attainments, and still remaining to be seen.

But the choice of his habitation, and the manner of pursuing his studies, were not the only eccentricities of this extraordinary character. With regret it must be stated that his house was his only place of devotion, and he was never known to descend from the rugged mountain to join with his fellow-creatures in acknowledging his duties to his Creator, either at the parish church or at any other place of divine worship. The opinions of his wife coincided with his own. 'The Philosopher' was often visited by persons of information from the neighbourhood, and his enquiries and remarks on such occasions evinced much acuteness and originality of thought. He was favoured especially with the frequent notice of Mr. William Cookworthy, of Plymouth, a member of the Society of Friends, and an eminent chemist and mathematician, who both knew and valued him. But death at length found out the retreat of Daniel Gumb, and lodged him in a cavern more narrow than that which he had excavated for himself. His inscription, "D. GUMB, 1735," may yet be seen in the rock, and the remains of his garden walls are very apparent. Some of his descendants continue the occupation of stone-cutters, and still reside in the vicinity of their ancestor's mountain tenement.

GRECIAN AND ALBANIAN COSTUMES.

THE great variety of picturesque costume the traveller meets with throughout Greece, Albania, the coasts of Asia Minor, and the Levant, generally gives a singular charm and interest to his route. In continental Greece, not merely every province, but every district, nay, almost every town and village, has its distinctive dress: so that when the people are seen in crowds at fairs, or any common place of rendezvous, an attentive observer of their costume can tell where they all come from, without reference to anything else. This is also the case in the south of Italy, particularly in Calabria, Basilicata, and Apulia, where the whole type of manners and customs is much more Grecian than Italian. In the mountains that back and hem in northern Greece, and which are chiefly occupied by tribes descended from the great Slavonic race, the costume is essentially different from that worn by the Greeks; and this costume, again,

is subdivided and modified according to the difference of tribes and clans. The kilt, differing only in colour from that worn by our Highlanders, is common to them all; and the whole dress, figure, and manner of living of the Arnaouts, or Albanians, struck Lord Byron as bearing a striking resemblance to those of the Gaels of Scotland. These Arnaouts always wear a red shawl round the head;—their neighbours, the Monteuigrini, wear a yellow one; and the Chimariots, the Gegdes, and other Slavonic tribes, are distinguished, not only by a difference of colour, but also by the fashion of their turbans, and the way in which they wear them. They all go armed; and the importance and wealth of an Albanian may be estimated by the number of weapons he bears upon his person, and the richness of their mountings and inlaying in silver, gold, and precious stones. The chief of a clan is frequently seen thus accoutred:—his long-barrelled, slim-stocked gun in his hand, four mounted pistols in his girdle, a sabre by his side, a large horn for powder, and a cartouche-box slung over his shoulder, a yataghan, and a short dagger stuck in his girdle to keep company with his pistols—in short, he is a walking mass of arms; and, though rude, undisciplined, and not worth much in an open field against regular troops, he is a dangerous enemy to encounter in irregular mountain-warfare. His taste for dress is almost as expensive as that for arms; his loose jacket is generally richly embroidered in gold; and the gyves, which descend from the knee to the ankle, and the massy clasps that fasten on his buskins or sandals, are pretty generally of the same metal, or at least richly ornamented with it. The colour of the kilt is white among all the tribes; and, however dirty may be the shirt, which is very seldom changed, it is the special care of the Albanian to keep the kilt spotless as new-fallen snow. A good deal of this care is also extended to the sheep-skin capote, which is worn, in a most graceful manner, over the right shoulder. We have been treating of a man of importance; but all ranks of Albanians have a passion for dress and finery, and, when not absolute paupers, contrive to go smartly attired and armed. The long gun is even more indispensable than a pipe to the Turk, or an umbrella to an Englishman in rainy weather. "This weapon," says Mr. Hobhouse, "is to be found in every cottage in Albania: the peasant carries it with him either when he tends his flocks or tills his land. It is the weapon in which he considers himself to excel, and he regards it both as his ornament and defence. The gun-barrels, however, are thin and ill-made, and the locks are of the rudest manufacture, the works being generally on the outside. Owing to this circumstance, and as the powder is large-grained, and otherwise very bad, the Albanians are not good marksmen, although they never fire without a rest, and take a very deliberate aim*."

We fancy that, as marksmen, the Albanians vary in ability, for we saw some clans at Constantinople that fired with admirable precision. We believe, however, the powder furnished them by the Sultan was English. Their mode of practice was this:—they built up a tam-bour of loose stones, between three and four feet high, like those the Greeks loved to fight behind during their late war, and then, dropping on the knee, rested the barrel of their piece on a stone, and fired, after taking a cool aim. Some of these fellows were about the finest specimens of limb, make, and feature, that we ever beheld; but there is an expression of cunning and ferocity in the Arnaout countenance which renders it disagreeable. Many of them, from the snowy mountains of Albania and Thessaly, were as fair in complexion as Englishmen or Scotchmen: some of them had light

* 'A Journey through Albania, and other Provinces of Turkey,' &c., &c., by J. C. Hobhouse.

brown hair, and not a few sandy-coloured hair. They wore no hair at all on the fore-part of their heads, but suffered it to flow down behind, in large quantities, from the top of the crown; it was generally in curls, but they are said to admire it most when straight and long. These hardy mountaineers, who were then about to take the field against the Russians, evidently carried their fortunes on their backs, for every one of them had some gold or silver worked in his jacket or vest. As they are almost constantly at war, and as property is very insecure in their own turbulent country, we believe this portable, succinct mode of investing it, which also obtains among the Turks, is almost general among them.

At Smyrna, we had an opportunity of watching the proceedings of two Albanians, who had recently left the service of the Pasha of Scio. With their heads turned



[Albanian Officer.]

with the comparative freedom of that great sea-port, they plunged into all the dissipations it afforded, their main and capital pleasure, however, being drinking the rum and brandy carried thither by English, American, and French ships. They had little or no money, but they paid their way in uncoined metal. One of them had a small gold chain, of which he cut off so many links a day, according to their expenses, as long as it lasted. When this was drunk out, they drew upon the mounting and inlaying of their yataghans and pistols, and when that resource was exhausted, they began to strip the embroidery from their clothes. At last, having fairly drunk all the gold and silver off their backs, they girded up their loins, slung their guns across their shoulders, and took their way into the interior of the country, to seek service from the Turkish governor of Magnesia. The only things of value they had left untouched when they departed from Smyrna were the silver mountings of their guns.

The Albanians have the practice, so common among our sailors and people of various nations, of making figures on their arms and legs, by punctures which they colour with gunpowder. The custom is ancient, for Strabo informs us it was prevalent among the Illyrians. They are so fond of going smart, that nearly every man among them is an adept in tailoring, and can make his own clothes. In passing an Albanian corps-de-garde, we have often been amused by seeing a sturdy, fierce-looking fellow armed to the teeth, plying the needle with wonderful activity, and cutting and

patching with the address of a professional schneider. They almost invariably carry about their persons a small quantity of cloth, red leather, catgut, some thread, and a large needle. These articles are usually wrapt up in part of the pouch which contains their cartridges. But there is another operation one is apt to see on passing their stations, which is not so agreeable to the eye. Though so fine, they are very filthy—they generally wear their shirts and under vestments till they rot on their skin, and they swarm with vermin, which they pick from themselves or from one another in public. The shaggy capote is also an admirable receptacle for all kinds of vermin. With his clean shirt and frequent change of linen, John Bull may put up with his queerly-cut clothes and his ugly hat, without envying the Albanian his picturesque attire, or the Turk his flowing robes. It has been said by travellers, and our own sad experience vouches for the correctness of the assertion, that in Turkey, from the highest rank to the lowest, it is difficult to find the person or the house of a single individual wholly free from this plague of Egypt, and almost impossible to avoid being invaded by it while travelling in that country; but the Christian physician of Ali Pasha at Yanina assured Lord Byron and Mr. Hobhouse that "Le pou des Albanais est le plus gras et le plus gros du monde." (The louse of the Albanians is the fattest and biggest in the world.) In addition to the small red cloth skull-cap, which in form resembles the cup of an acorn, those who can afford it wear a shawl bound round the head in the turban fashion. In cold weather they draw the ends of this shawl over the ears and tie them under the chin, as will be seen in the annexed engraving.

This figure represents an Albanian soldier in all his glory; and in the days of old Ali Pasha there was a strong corps of Janissaries in his capital equally well dressed and splendidly appointed. The bosses on their knees and ancles were of silver filigreed, the bottom of



[Janissary of Janina.]

the sandal of goat-skin, the open work at the top of cat-gut, studded with small silver stars. The Aghas and the superior officers of the Albanian Janissaries were wont to have their jackets made of rich velvet, and so inlaid with gold or silver that they had almost the stiffness of a coat of mail. "The whole Albanian costume," says Mr. Hobhouse, "when quite new and clean, is incomparably more elegant than any worn in the Turkish empire." And to this we may add that it has served as a model to several others of the sultan's former subjects, particularly to the Greeks of the Morea and Maina, and the mountaineers of Candia, who have copied it more or less closely, but confined the use of it to men of martial occupations.

Although they evidently think that dress makes the man, we shall not, in describing their garments, dwell upon the character and moral qualities of the Albanians. We may do this on a future occasion, but there is one little peculiarity that may be mentioned here. The majority of the clans profess to be Mohammedans, but there are many that profess to be Christians, and adhere to the ceremonies of the Greek church. But, Mohammedan or Christian, their religious faith sits so lightly upon them, that when in a country where the Turks are more numerous they go to the mosque, and when in districts where the Greeks are in large majority, and mosques "few and far between," they go quietly to church, and in this manner the mass of them will chop and change about as often as the circumstances just related occur.

Every Turkish Pasha or Mootzellim of any importance has, or at least used to have a few years ago, a set of fierce-looking Albanians for his body guard. In this way they were scattered thickly over the whole of continental Greece, with the exception of the country of the Maïnotes—a people as fierce and warlike as themselves. The partial adoption of their costume by the Greeks may have arisen from this circumstance, but it remains to be mentioned that many colonies of Albanians who, though they have lost the language and speak Greek, retain the dress, manners, and features of the great Slavonic stock, have been settled for many ages in the plains of Greece. Thessaly, Bœotia, Attica, and the Eastern Morea have long been full of their villages; and the men of the island of Hydra, who took so active, and, on the whole, so noble a part in the late wars against the Turks, are of Albanian and Slavonian descent, and wear the Albanian dress. Moreover the Hellenic or true Greek blood, which must be looked for in its purity among the islands of the Archipelago, has been mixed up, by intermarriages with that of the Albanians, in a large part of the country, and hence would naturally arise a fusion of manners, customs, and dress. There may have been some other causes besides good taste, which would naturally give preference to such a costume, but this fact is certain, that most of the armed Greeks we met during the late war of independence, wore the white kilt, and nearly all the rest of the Albanian dress, which was also adopted by the English general Church, when he took the command of the Grecian army.

In this engraving there is no sheep-skin capote, but we have frequently seen it worn both by officers and men among the Greeks. In the groups of islands, the Cyclades and the Sporades, the Albanian kilt was less rarely seen; but there, as on the coast of Asia Minor, and at Constantinople, the Greeks wore loose trowsers like the Turks, but dyed blue, and had Turkish morocco boots and slippers over them instead of the buskin or sandal. This was also the case with the non-military Greeks in the Morea. The Turks prohibited them all the use of yellow slippers, and made them (under penalty of a bastinading) wear black or dingy-coloured ones. This exclusion and humiliating distinction was

a constant source of irritation to the Greeks, and boots and slippers had more to do in bringing about their revolution than some philosophers would imagine.



[Greek Officer of Nauplia, or Napoli di Romania.]

The passion for dress and finery is common to the whole Greek race, high or low. The costume of the capitani, or feudal chieftains of the mountainous and always independent country of Maina, is or was very splendid and graceful. Mr. Morrit, in describing one of these capitani, says,—“He wore a close vest with open sleeves of white and gold embroidery, and a short black velvet mantle edged with sables. The sash which held his pistols and his poignard was a shawl of red and gold. His light-blue trowsers were gathered at the knee, and below them were close gaiters of blue cloth with gold embroidery, and silver-gilt bosses to protect the ancles. When he left the house, he flung on his shoulders a rich cloth mantle with loose sleeves, which was blue without and red within, embroidered with gold in front and down the sleeves in the most sumptuous manner. His turban was green and gold. * * * The dress of the lower orders is in the same form, with the necessary variations in the quality of the materials and absence of the ornaments. It differed considerably from that of the Turks, and the shoes were made either of yellow or untanned leather, and fitted tightly to the foot. The hair was never shaved *.”

If our theatrical people would attend to a few descriptions like these, they would not be guilty of so many anomalies in costume. There have been some improvements of late, but, generally speaking, the Turks and Greeks on our stage are no more like what they are meant to represent, than the Punch and Judy in our streets are like well-dressed English ladies and gentlemen.

* Memoirs relating to European and Asiatic Turkey, edited from Manuscript Journals by Robert Walpole, M.A.

THE PITA-PLANT.

[From a Correspondent.]

MANY plants yield a fibre which is employed by the inhabitants of the regions in which they grow for the manufacture of cordage, &c., under the denomination of *pite*, or *pita*, a kind of generic term applied with little accuracy of discrimination to plants of various and widely-different families, possessing but one common feature of resemblance, namely, the fibrous structure of their leaves, scapes, stems, or bark. Hence under the term *pita* we find comprehended plants belonging to the genera of agave, bromelia, yucca, &c. &c., the fibre of which varies much in its properties, and differs accordingly very materially in its intrinsic value. It were much to be wished, therefore, with a view to overcome the difficulties resulting from this indiscriminate application of the term *pita*, that travellers would endeavour to fix the botanic characters of the several plants confounded under this vague general denomination, and by determining the real value of the fibre yielded by each; lessen the danger of those disappointments to which purchasers are at present exposed from the want of an accurate mode of distinguishing the kind of *pita* which they are desirous of obtaining.

Among other instances of the inconvenience resulting from the cause just mentioned, it will be sufficient to observe that at least two different kinds of *pita* are to be met with in the market of Carthage, both the produce of that province, but differing widely in their properties and value. Of these we at present only know that the one comes from the neighbourhood of Talu, is of a darker colour and weaker texture than the other, and is probably obtained from a widely different plant. The other, which is represented as coming from the neighbourhood of the village of Guatacà, where the plant is said to grow abundantly without care or cultivation, is of a beautiful silvery white, very considerable strength, of great durability, light as that of very confined hygrometric action, and singularly capable of resisting the corrosive action of sea-water. This last is known in the market under the name of the *Pita de Guatacà*, and is obtained from the leaves of a plant of the family of Bromeliaceæ, nearly allied to the genus bromelia, to which Dr. Bancroft of Jamaica appears inclined to refer it under the name of bromelia *pita*, but from which it appears to us to differ most essentially in the structure of its fruit, the only part of its fructification which we have had an opportunity of examining, and which, in place of being a three-celled, many-seeded berry like that of bromelia, we found to consist of an aggregate of dry capsules, arranged in a head resembling in form the small pine-apple, but destitute of its crown, round a central receptacle, each capsule containing five or six irregularly reniform seeds, for the most part hollow and abortive, and each furnished with a triangular bracte, terminating in a strong pointed spine, and armed at its edges by recurved spinous teeth. Our plants were first raised from seeds sent to this country in 1827, by Edward Watts, Esq., late H.B.M. Consul at Carthage, after a number of former unsuccessful trials: none of these, however, have as yet manifested the smallest disposition to flower, although now in their ninth year; and by late accounts from Jamaica, to which island plants were sent about four years since from Carthage by Mr. Watts, the same tardiness of flowering appears to exist there, hence we are at present unable to determine with precision more than the family to which it belongs. The original plants raised in this country may be seen at Mr. Pontey's nursery at Plymouth, and offsets from these are to be found at Mr. Lambert's at Bayton House, Wilts, at the Apothecaries' garden at Chelsea, and the botanic garden at Edinburgh. In its native

seat the leaves are said to attain a length of twelve feet or more, and we have had specimens of fibre which measured above ten feet in length. From the laborious and unscientific method by which the fibre is separated from the leaves by the ignorant inhabitants of the region in which it grows, the price at which it is sold in the market is excessive, while its strength is extremely uncertain; notwithstanding which, we are informed by Dr. Bancroft that he has seen in the harbour of Kingston, Jamaica, a schooner from Vera Cruz, which had not only her standing and running rigging made of this fibre, but also her cables, in which an union of strength and durability is so essential a requisite. From a series of experiments made at the Plymouth Yard, under the direction of Captain Superintendent Ross, we learn that while 4·5834 lbs. of hemp were required for the manufacture of two log lines, and 1 lb. of seine twine, only 3 lbs. of *pita* fibre were required to yield the same produce. Hence, taking the quantity of hemp required for the rigging of a first-rate ship of war at 80·3571 tons, 52·5966 tons of *pita* would be sufficient to supply its place. From a series of experiments made with the greatest care by Captain M'Adam, of the Royal Marines, with a view of comparing the hygrometric properties of this fibre with those of hemp, it appears that while a log line of the latter contracts 21·6 feet out of a length of fifty fathoms, or 300 feet, the contraction of an equal length of the former does not exceed 16·2 feet, being nearly five feet and a half less than the contraction of the hemp; and from a recent letter received from that gentleman, dated on board H.M.S. Portland, off Malta, on the 10th of July, 1835, we further learn that the results of his experiments have been fully confirmed by actual trial on board that ship, that the *pita* line, although originally smaller than the hempen log line against which it was tried, has worn equally well; that it ceased to be affected by the half-hourly exposure to wet and dry, to which all log lines are subjected, on the third day after being first used; while the hempen line continued to be affected by the moisture for five months after the period of its first coming into use. The trial commenced on the 7th of November, 1834, and ended on the 3rd of July, 1835, to the entire satisfaction of the officers of the ship who took an interest in the result. In addition to these properties, the *pita* is one-sixth lighter than hemp—an inch rope of the former measuring thirty feet, weighing only ten ounces, while a similar rope of hemp weighed twelve ounces. Our limits will not admit of entering further into detail; but we cannot dismiss the subject without recommending the culture of this valuable plant in our West Indian colonies, and the improvement of its fibre to the most serious consideration of both our own government and our colonial legislatures, as a means of securing a supply of so essential an article of naval stores within ourselves, and guarding against those ruinous fluctuations of price which we have experienced in periods of war.

	Pita.	Hemp.
Weight employed to make two log lines and 1 lb. of seine twine in pounds and decimals	3·00000	4·58340
Weight of an inch rope of fifty fathoms	6·04839	7·25806
Contraction from wet in a line of fifty fathoms long, in feet and decimal parts	16·2	21·6

PRISON DISCIPLINE.

A SHORT and interesting narrative of twenty-three years' superintendence of the women's and boys' wards in Warwick Gaol has just been published by Mrs. Tatnall, widow of the late governor of that prison. A most instructive example is afforded by this little work of the good which one right-minded and persevering individual may effect. The unassisted efforts of Mrs. Tatnall soon

produced a salutary result; and she then received considerable aid in her endeavours to render the gaol a penitentiary as well as a place of punishment. The plans upon which she acted are now sanctioned and enforced by legal authority, but she must be considered as having led the way to the recognition of an improved system.* We regret to find from the introduction, written by Sir E. Eardley Wilmot, Bart., that owing to the death of her husband, Mrs. Tatnall is now in need of pecuniary assistance. None surely can more richly deserve a provision in the decline of life than those who, like this unpretending individual, have devoted their best days to the improvement of their fellow-creatures without desiring or receiving any other recompense than the satisfaction arising from the performance of good works.

Mrs. Tatnall thus describes her introduction to the scene of her useful exertions:—"On the 3rd of March, 1803, my wedding-day, in the twenty-fourth year of my age, I left my father's house at Kineton, and entered this abode of wretchedness. 'Surely,' thought I, 'it is impossible to live here;' and the first time my husband quitted me, notwithstanding he had charged me to be his representative during his absence, I hastened to the happy home I had so lately left. On his return, instead of finding me at my post attending to the duties of his office, I was gone to my family. He followed me, and by reasoning tried to reconcile me to the situation, pointing out the difficulty of his obtaining another if he gave it up. I wept bitterly at my lot, and with great reluctance returned with him to the gaol."

The contrast between the vice and misery of a gaol, and that of a quiet and virtuous home, might well produce strong effects on a young woman of four-and-twenty; but happily a path was discovered, surrounded by useful duties, which Mrs. Tatnall humbly determined to fulfil, and this made even the atmosphere of a prison agreeable. Just after the occurrence which we have narrated above, the assizes were held, when fresh scenes of misery presented themselves. Mrs. Tatnall says,—“At first I could only weep for these poor misguided beings; but, after some time spent in commiserating their miserable condition, it occurred to me that something might be done, even by me, to mitigate the terrors of some guilty conscience, and lead some desponding creature to a better way of thinking and acting. But what to do, or where to begin, was the difficulty. At length I determined to direct my attention to those of my own sex. But the soul-harrowing groans of some, and the dreadful imprecations of others, seemed to deaden my senses. When my first emotions had subsided, I tried to soothe the agonized, and to calm the furious; but to no purpose, such was the tumult and confusion. At last I desired as many of them as could find seats to sit down; and I asked if any of them could read? Only one or two, among upwards of twenty, were able. I asked if I should read to them? Many asked what good that would do them? I told them, that if they would read, or hear the bible read, and pray to God in sincerity and humility, he would hear them, and enable them to bear his chastisements with patience and fortitude. I read a few psalms and prayers. Some appeared attentive; while the grief and distress of others were too violent to suffer them to listen. I asked if they wished to see me again? A few only hoped I would again visit them. The next day I found them more composed; and I begged those who wished to hear me read to them would sit down, and the others walk in the court. A very small number remained. At my third visit, a much larger number of persons remained than before; and by continuing these visits daily, the whole were in time induced to give their attention to what I read.”

Mrs. Tatnall's next object was to devise some plan by which the many hours that were spent in idleness and disorder might be employed in some manner beneficial to the moral well-being and conducive to the comforts of the female prisoners. She states,—“In this I met with many difficulties, as those who had been employed in manufactories from the earliest ages could neither knit nor sew; mothers of large families were as ignorant of needle-work as the young, and acknowledged that they never used a needle. I inquired how they managed to clothe themselves and families? They replied, that when they had money, they bought ready-made clothes of every description, wore them as long as they lasted, but never attempted to mend them. While trade was good, and they had constant employment, this did very well; but when this resource failed, they began to feel the natural consequence of improvidence, which led them to unlawful methods of supplying their necessities.” She adds,—“Nothing can exceed the difficulties and annoyances I had to encounter at the commencement of my undertaking. Not a day passed but some of the women were locked up for fighting and other unruly conduct; nor was it possible to prevent it, left as they unavoidably were to themselves. All the prisoners were allowed to purchase their own food; and there being but one small fire-place in the women's apartment, there was no end to the quarrels that took place in their endeavours to obtain the first use of the fire. The turnkey's daily complaint, either to the governor or myself, was 'that he had more trouble with these twenty women than with all the men put together; for it was of no use to lock them up for ill conduct, for when they were released they began as bad as ever.' Notwithstanding all these disagreeables and hindrances, I persevered in my daily visits, and at length I found I had attained so much influence over the females, that I proposed to the governor to give me the entire management of them; to which he agreed, on condition that, when punishment was necessary, I should not interfere with his orders.”

Some of the female prisoners being removed for transportation, more order was established; and those who were newly committed found a degree of propriety established to which they were unavoidably impelled to pay respect. Mrs. Tatnall proceeded in her self-imposed task, and she tells us she had little time to think of her former home and relatives, so entirely did her undertaking engross every thought and moment. But notwithstanding she met with much to encourage her in her arduous course, she not unfrequently “almost despaired of any good result, and at times even felt a wish to give it up. Some fresh object of interest, however, either among the sick, or some new inmate, urged me to proceed. My plans were still so much restrained for want of room, that I could do little more than read, advise, and give as much employment as possible.” Though thus labouring under many impediments, a better classification of the unfortunate inmates of the prison became an anxious object of her attention. Her views on the lamentable intermixture which prevailed of offenders of every degree are thus clearly expressed:—"My first wish was to be able to separate the most guilty from the less criminal. It was grievous to see some young creatures, committed for a first and trivial offence, obliged to herd with the most hardened and depraved of the human species. Many appeared to shrink from the association, and keep as much aloof as the confined nature of the place would admit."

The narrative continues:—"For nine or ten years I went on through all difficulties, which were very much increased in consequence of the increased number of prisoners: even girls as young as from ten to twelve

years of age were often committed for trifling offences. These were objects of particular attention; and I selected one of the women to teach them to work, read, and say the catechism and prayers, for which I made her a trifling compensation. These unfortunate children were generally the offspring of prostitutes, or of those whose crimes had brought on them the punishment of banishment or death, and had left their children to struggle through life how and where they could. They were generally much smaller than children of the same age usually are; but their features and countenance bore no marks of the simplicity of childhood. On the contrary, these were strongly marked by the cunning and depravity too visible in old offenders. I found that they had been employed by them to pass their days in purloining all that came in their way. Such were their daily habits till the hand of justice overtook them. A prison had no terrors for them; they seemed as much at home as the most hardened. It was long before I could fix their attention to the instructions I wished them to receive; but in time I had the satisfaction to perceive an alteration in their manner and appearance. They became anxious to obtain my approbation for what they had done or learnt; and as these favourable symptoms increased, I felt the more grieved to think that a short time would in all probability throw them again on the world, destitute of a home or advice, but such as the most degraded of the human species had to offer."

In the early part of Mrs. Tatnall's residence in the gaol at Warwick, the committal of offenders under sixteen years of age rarely occurred; but a few years afterwards, twenty young boys under this age were inmates of the gaol; and at the Spring Assizes in 1821, out of 226 prisoners 110 were between the ages of 13 and 20. For the youngest boys Mrs. Tatnall endeavoured to do something towards amending their characters and condition. She says,—“I collected all the boys under sixteen years of age, (some were under ten years of age,) and arranged a school as well as my limited means would allow. The governor fixed on one of the prisoners, whose conduct and character were least unexceptionable, to take the management of them, teach them to read and say their prayers and catechism. The master took great pains with them, and in time some began to read tolerably, and repeated the prayers night and morning. The want of books was a great drawback to my progress. The moral and religious condition of these poor children was truly deplorable. They were entirely ignorant of the existence of a Supreme Being. Many of them were far from being depraved characters; but either from destitution, bad example, and other causes, which so frequently tempt children to act dishonestly when left without parents or friends, had been induced to commit offences, of the nature of which they did not appear to be aware."

The following simple and affecting account of the deaths of two of these boys shows how possible it is, by kindness and affection, to revive the better feelings of human nature, even when apparently extinct:—“Two little boys, one thirteen, the other fourteen years of age, were brought to the prison. Both were in the last stage of consumption, emaciated, and destitute of clothing. Neither had any remembrance of their parents; they had been left destitute at too early an age to know who or what the beings were to whom they owed their birth, and had been in the habit of wandering about during the day, subsisting on precarious charity and theft. Their nights had been passed near a brick-kiln. I watched, I may say, with a mother's care, the progress of the disease, and administered all the little comforts in my power to bestow. Such had been their extreme destitution, that it was with great difficulty they were made to believe that some sheets hanging at

the fire were intended for their use. After their removal to the infirmary, a few weeks terminated their lives. The night previous to the death of the first, he asked repeatedly how long it would be before the clock struck nine (the hour at which I usually went to see them). On entering the room, I perceived a marked alteration in his appearance. When I was seated by his bed, he put out his emaciated hands, wished to be raised, laid his head on my shoulder, looked at me with a smile of delight, then kissed me, and instantly expired. The other poor child departed in the same happy, composed manner, a few days after."

The efficacy of the boys' school led to the establishment of an asylum, in which are received those who have been benefited by a course of discipline and instruction in the gaol; and instead of the boys being thrown friendless on the world, they are, after a certain time, provided with suitable situations, and put in the way of becoming useful members of society. In 1815 the magistrates presented Mrs. Tatnall with a handsome tea-pot and stand, “in acknowledgment of her meritorious conduct to the prisoners in the gaol;” and well did she deserve this testimonial, for her exertions had been self-imposed, and had been pursued for a long period under the cold disregard of many. This was followed happily by approbation and encouragement. We may add that, as one of the first active promoters of the improvement of prisons in England, by establishing schools for the young of both sexes, by separating prisoners who had not been tried from those whose guilt had been proved; the young from the old, and the less guilty from the depraved, and by providing useful occupation for the prisoners, and doing everything which appeared to be within her power to render them sensible of the degradation of the course which they had pursued, Mrs. Tatnall deserves to enjoy a wider, and, under her present circumstances, a more substantial recognition of the value and importance of her praiseworthy services than she has yet received.

To live.—I see too many men willing to live to no purpose, caring only to be rid of time; on what terms soever, making it the only scope of their life to live: a disposition that may well befit brute creatures, which are not capable of any other aim, save merely their own preservation; but, for men that enjoy the privilege of reason, for Christians that pretend a title to religion, too base and unworthy. Where God hath bestowed these higher faculties he looks for other improvements; for what a poor thing is it only to live! a thing common to us with the most despised vermin that breeds on our own corruption; but to live for some more excellent ends is that which reason suggests, and religion perfects.—*Bishop Hall.*

Deity.—If miracles be ceased, yet marvels will never cease. There is no creature in the world wherein we may not see enough to wonder at; for there is no worm of the earth, no spire of grass, no leaf, no twig, wherein we may not see the footsteps of a Deity. The best visible creature is man: now, what man is he that can make but a hair or a straw, much less any sensitive creature? So as no less than an infinite power is seen in every object that presents itself to our eyes. If, therefore, we look only upon the outsides of these bodily substances, and do not see God in every thing, we are no better than brutish; making use merely of our sense, without the least improvement of our faith or our reason. Contrary, then, to the opinion of those men who hold that a wise man should admire nothing, I say, that a man truly wise and good should admire every thing; or, rather, that infiniteness of wisdom and omnipotence, which shows itself in every visible object.—*Bishop Hall.*

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PETRA.



[Temple at Petra.]

IN the preceding notice of Petra (No. 261), the authorities quoted will enable the reader to obtain a general idea of the situation, history, and character of this interesting city.

The whole land of Idumea, now a mountainous rocky desert, was vaguely known to be full of remains of ancient splendour and magnificence: but the country is inhabited by fierce and intractable tribes of Arabs, who seem, as Laborde remarks in the preface to his work, to have inherited the spirit of their forefathers, and to proclaim to approaching travellers, as the Edomites did to the children of Israel, "Thou shalt not pass!" The country has therefore remained sealed up to modern research until very lately. Burckhardt, as intimated in the previous notice, was the first modern European traveller who succeeded in penetrating to the Wady Mousa*, and discovered the ruins of Petra: this was in 1812. Since then several travellers have visited Petra, but none with such complete success as MM. Laborde and Linant.

Previous travellers had entered Idumea from the north. Burckhardt, coming from Syria, aimed at crossing the desert to Cairo in Egypt. The party who, with Messrs. Irby, Mangles, and Banks, succeeded in reaching Petra, though at the risk of their lives, and in the teeth of fierce opposition, came from Jerusalem. MM. Laborde and Linant took an opposite direction: from Cairo they crossed the peninsula of Sinai to the head of the Gulf of Akaba, and entered Idumea from this point. Their success justified their choice of this route; they attracted less attention,—encountered less opposition,—and were enabled to spend upwards of eight days in the Wady Mousa, examining and taking drawings of the ruins of Petra,—the great object of their journey; of which the work published by Laborde contains a plan of the town, and more than thirty views of the temples, tombs, and excavations which are to be seen there.

MM. Laborde and Linant, after traversing the Wady Araba, entered the Wady Mousa, the "mysterious valley of Petra." Laborde confesses that, notwithstanding the perfect good feeling which existed between the travellers and their conductors, he felt an indefinable kind of fear that the grand object of their journey—the minute investigation of Petra—might, after all, be defeated. The "Fellahs of Wady Mousa" were yet to be reconciled to their plan of operations. It is a common belief amongst the Arabs that immense treasures are buried beneath the ruins that strew the rocky desert of Idumea; and it is, of course, a natural inference that the object of Europeans in visiting the country is, by magic or superior craft, to obtain access to those treasures, the possession of which belongs to the lords of the soil. But in drawing near to the city, a danger, says M. Laborde, on which the travellers had not reckoned, proved a cause of their security. The plague had been brought from the shores of the Mediterranean into the secluded Wady Mousa, and the Fellahs had fled from its violence. The travellers, during their inspection of the city, were comparatively free from annoyance: but they would have stayed longer if their Arab conductors, who were afraid of the plague, had not teased them to return; and the fact of their residence in Petra was beginning to spread. They returned by the route by which they came.

In Laborde's plan of Petra, the town is exhibited as completely encircled by huge rocks. These rocks are excavated in every variety of form; but the immense number of tombs constitute the grand peculiarity of Petra. The vast labour which must have been bestowed on these excavations appears astonishing. The only entrance to the town is from the south-west, by the windings of a

* Wady signifies a valley,—a district with a stream running through it. Wady Mousa is the Valley of Moses.

narrow ravine, through which flows the river, or rather stream, of Wady Mousa. Fronting the highway, at a sharp turn of the road leading into the town, appears "El Khasne," of which the wood-cut accompanying this notice is an illustration. Nearer to the town is the amphitheatre, of which a view was given in No. 261.

MM. Laborde and Linant arrived in Petra from the south; and on reaching a point from which they could see the extent of the town, they were struck with amazement at the immense mass of ruins strewed around, and the extensive circle of rocks enclosing the place, pierced with an innumerable quantity of excavations. In fact, words are inadequate to convey a clear idea of the ruins of Petra. It is only by a reference to views, and those views given on an extended scale, as in Laborde's work, that the nature of the place can be rightly understood. The Arabs have committed considerable mischief by breaking and throwing down the architectural ornaments, especially of the tombs, in their searches after supposed hidden treasure;—otherwise, many of the ruins are in a very good state of preservation.

The temple of which we give a view has been termed by the Arabs "Khasné Pharaon,"—Pharaoh's treasure, from their supposition that here are hidden those stores which they have vainly sought for elsewhere. In the sarcastic words of M. Laborde, "It was quite in accordance with their character, after having fruitlessly spoiled the monuments enclosed in the tombs, to seek the spot where the constructor of such magnificent edifices had deposited his treasure. That spot they supposed they had found at last—it was the urn which may be distinguished on the top of the monument. This must contain all the riches of the great king;—but, unhappily, it is out of their reach, and only taunts their desire. Consequently, each time that they pass through the ravine, they stop an instant, fire at the urn, and endeavour to break it, in the hope of bringing it down and securing the treasure. Their efforts are fruitless; and they retire murmuring against the King of Giants, who has so adroitly placed his treasure 120 feet above their reach."

The temple is hewn in an enormous and compact block of freestone, which is lightly coloured with oxide of iron. Its high state of preservation is owing to the shelter which the surrounding rocks afford it against the wind, and also in preserving the roof from the rain. The only traces of deterioration are in the statues at the base of the column, which has been produced by the humidity undermining the parts most in relief, or nearest to the ground. To the same cause may be attributed the fall of one of the columns which was attached to the front. Had the structure been built instead of being hewn, the fall of this column would have dragged down the entire building. As it is, it merely occasions a void, which does not destroy the effect of the whole. "It has even been useful," says M. Laborde, "in so far as it enabled us, by taking its dimensions, to ascertain the probable height of the temple, which it would otherwise have been impossible to do with precision." He calls the temple "one of the wonders of antiquity," and apologizes for the expression in the following manner:—"We are apt, doubtless, to charge the traveller with exaggeration who endeavours, by high-sounding eulogiums, to enhance the merit of his fatigues, or the value of his labours: but here, at least, plates designed with care will establish the truth of a description which might otherwise appear extravagant."

The interior of the temple does not fulfil the expectations created by the magnificence of the exterior. Several steps conduct to a room, the door of which is perceived under the peristyle. "Although the chamber is hewn regularly, and is in good proportion, the

walls are rough, its doors lead to nothing, and the entire appears to have been abandoned while the work was yet in progress. There are two lateral chambers, one of which is irregular, and the other presents two apertures, which seem to have been hewn for two coffins."

The following description of this temple is given by Captains Irby and Mangles:—"The position is one of the most beautiful that could be imagined for the front of a great temple, the richness and exquisite finish of whose decorations offer a most remarkable contrast to the savage scenery that surrounds it. It is of a very lofty proportion, the elevation comprising two stories. The taste is not exactly to be commended; but many of the details and ornaments, and the size and proportion of the great doorway especially, to which there are five steps of ascent from the portico, are very noble. No part is built, the whole being purely a work of excavation; and its minutest embellishments, wherever the hand of man has not purposely effaced and obliterated them, are so perfect, that it may be doubted whether any work of the ancients, excepting, perhaps, some on the banks of the Nile, have come down to our time so little injured by the lapse of ages. There is, in fact, scarcely a building of forty years' standing in England so well preserved in the greater part of its architectural decorations. Of the larger members of the architecture nothing is deficient, excepting a single column of the portico; the statues are numerous and colossal."

A CASE OF CATALEPSY.

THE following is an extract of a letter with which we have been recently favoured by a gentleman residing at Birmingham:—

"This afternoon I have witnessed the most extraordinary circumstance I ever met with. It was a case of what the surgeons call catalepsy,—a disease so uncommon, that one of the most eminent medical practitioners this country ever produced not only never saw a case, but doubted its existence. I called to ask Mr. ——— about my little boy, Vincent, when I learnt that there was a female in his house who had frequent attacks of this disease; and while I was there a fit occurred. I went into the room to see the patient. She was a girl of about eighteen years of age, of interesting and intelligent appearance; and, on first sight, I should have thought her fast asleep, but with pleasing dreams, for there was a pleasant smile settled on her countenance. I had previously understood that the effect of these fits was to rigidly fix the muscles, while the instinctive motions of the involuntary muscles continued to act. The breathing was hardly perceptible; her pulse quickened, but not strong; her eyes closed, and her limbs perfectly motionless, one hand firmly grasping the other. Two medical men were present, and they endeavoured to separate the hands: it required all their strength to do so; but the moment they were moved, they fixed rigidly in the position in which they were placed. After a time, one of the party laid hold of her hand, but, by a convulsive effort, she grasped his hand so firmly that he could not release it, and so tight that he could hardly endure the pain she caused him. It was with much difficulty, and after much suffering from her finger-nails, that he liberated himself: subsequently, by main force, one of her arms was relaxed, and raised to a position in which it could not be maintained, in a state of health, without much pain and violent muscular action, but there it remained until an approach towards recovery released the rigid muscles, and it gradually sank to her side. At this moment a convulsive motion of the mouth, and violent and rapid breathings appeared to indicate a return towards consciousness; but these subsided, and she again resumed entire rigidity. Twice

did this happen whilst I was by, but although I remained about ten minutes I left her in the same state of unconsciousness in which I first saw her. I have not mentioned that twice or three times one of her eyes was opened by raising the eyelid, but it was not perceptible that she could see; for her eye was not at all affected by any motion in front of it, however close, notwithstanding it appeared to be as bright and sensitive as in a state of health. Her aunt told me that she never suffers any subsequent pain, but that she recovers refreshed, as from a deep sleep. Mr. ——— mentioned that yesterday she had a fit while standing, and that she remained motionless as a statue until, by main force, he overweighed the centre of gravity, when she fell on his arm: it was with some trouble that he succeeded in again balancing her; but this done, she remained safe, upright, and immoveable."

THE LATE MR. TROUGHTON.

[The following is extracted from an interesting Memoir of the late Mr. Troughton, the well-known astronomical-instrument maker, which appears in the last Annual Report of the Astronomical Society.]

THE only astronomical instrument which is not greatly indebted to Mr. Troughton is the telescope; and he was deterred from any attempt in this branch of his art by a singular physical defect, which existed in many members of his family. He could not distinguish colours, and had little idea of them, except generally, as they conveyed the idea of greater or less light. The ripe cherry and its leaf were to him of one hue, only to be distinguished by their form; and he was in the habit of relating some curious mistakes committed by himself, and others of his relations, in confounding green and red. With this defect in his vision, he never attempted any experiments in which colour was concerned; and it is difficult to see how he could have done so with success.

Vicissitude.—When we see the year in his prime and pride, decked with beautiful blossoms and all goodly varieties of flowers, cheered with the music of birds, and stated in a sweet and moderate temper of heat and cold, how glad we are that we have made so good an exchange for a hard and chilling winter, and how ready we could be to wish that this pleasant and happy season might last all the year long! But herein, were our desires satisfied, we should wish to our own great disadvantage; for if the spring were not followed with an intention of summer's heat, those fruits, whose hopes we see in the bud and flower, could never come to any perfection; and even that succeeding fervour, if it should continue long, would be no less prejudicial to the health and life of all creatures; and if there were not a relaxation of that vigorous heat in autumn, so as the sap returns back into the root, we could never look to see but one year's fruit. And thus also it is spiritually; if our prosperity were not intermixed with vicissitudes of crosses, and if the lively beams of grace were not sometimes interchanged with cold desertions, we should never know what belongs to spiritual life. What should we do then, but be both patient of and thankful for our changes, and make no account of any constancy till we attain to the region of rest and blessedness?—*Bishop Hall.*

GRECIAN COSTUMES.

THE variety of dress among the women of Greece and Albania is much greater than that among the men, and quite as tasteful and convenient. Each of the Cyclades and Sporades—nearly every one of those scattered islands that stud the Ægean Sea from Cythera (now Cerigo) off the Malean Promontory, to Tenedos and Lemnos, that face the Trojan Plain, and farther on to Thasos off Philippi, has a distinctive female costume of its own. Even in islands that almost touch each other, as Paros and Naxos, this difference of dress obtains. The Greek islanders are, generally speaking, a finer race than their continental brethren; and female beauty

is very common in many of the islands. A natural grace and ease of manners and motion seem inherent to the whole stock, and all classes of it. The women of Milo, of Syra, of Tino, of Miconi, of Scio, and of Thasos are particularly distinguished by their personal charms and the beauty and picturesqueness of their costume.



[Woman of the Island of Casos or Thasos.]

One of the most distinctive variations in the Greek female attire is in the *coiffure* or manner of dressing the head. In some of the islands, and in parts of Continental Greece, young unmarried women go with their heads uncovered and with no ornament but their braided hair and a few natural flowers, as roses, pinks, or jessamines, stuck into it. This has a very pretty effect; but unfortunately in many parts of Greece, not satisfied with the flowing jet-black locks given them by nature, the women dye their hair an ugly artificial yellowish-brown colour, which sometimes borders on red, the very hue that our ladies and dandies take such trouble to conceal by oils and dyes. The Italian female peasants about Nola, Capua, Atella and other districts in the Terra di Lavoro dye their hair in the same manner and of the same colour. The practice also prevails at Avellino and in many parts of the country of the ancient Samnites. The method of these Neapolitan fair ones is to wash their hair once a-week with a lye of wood-ashes, which gives the desiderated flaxen or yellow-brown colour. This is supposed to be the true "flava Cæsaries" of the Latin poets; but the custom, though very ancient and very classical, is excessively unseemly. The Greek women use a vegetable powder brought from Africa, and sold by retail in the shops of the country. The powder, before it is used, is of a greyish-green colour, and obtained, as Doctor Holland believes, from the "*Lawsonia inermis*." But in a good portion both of insular and Continental Greece this dye is unknown, and the women, and the men too, who still merit the epithet of "long-haired" applied to them by Homer, permit their clean, black hair, unchanged by art, to fall free and unconfined over their neck and shoulders, as in the days of Virgil.

"Cæsariem effusæ nitidam per candida colla *."

At the islands of Scio, Ipsara, and Mitylene, (the ancient Lesbos and the birth-place of Sappho,) at Smyrna, Magnesia, Pergamus, and all parts of maritime Asia Minor where Greek colonies exist, the women braid up their hair and wear light-coloured muslin

* Georgics, lib. IV., v. 349.

turbans, which are more or less beautiful or costly in material, but invariably put on the head in an airy and most tasteful manner. Nothing can well be less like a true Eastern turban than the stiff, heavy thing so designated which is sometimes worn by English ladies of a certain age. The Madame Carsons and other milliners who pretend to taste ought to study modern Grecian costume and ancient Greek statues, in order to obtain the very perfection of that style of coiffure. Perhaps the most perfect style of the female turban is to be found among the ladies of Smyrna; and it is curious to remark that their most approved fashions might boast 2000 or more years of antiquity. At the old city of Pergamus, which is about sixty miles from Smyrna, we purchased, among other antiques, the heads of some little statues in terra cotta of peculiar grace; and in one of these we found precisely the same style of coiffure or head-dress as that which now prevails at Smyrna and in the neighbourhood. The little statues, though trifles, were evidently of the best period of Grecian art, when men made these things as if they had souls at their fingers' ends. The fashion, no doubt, had descended, like many ancient customs still existing in the country, from generation to generation, for we do not think it likely that the fair Smyrniotes ever copied it from busts or medals. The kalemkiars, or light-painted muslin handkerchiefs that compose these airy, elegant turbans are frequently very beautiful both in design and colouring. Flowers and fruits are generally represented. They are painted by hand, and the Armenians of Constantinople and Brusa are the principal makers of them.

We have mentioned Scio, which stands at the mouth of the Gulf of Smyrna, as one of the places distinguished for its Greek costume. In the happy days of that island, before the destroying hand of the Turk passed over it, (in 1822,) all classes of Greeks there dressed with exceeding elegance, for trade and industry had introduced a general prosperity, and good taste seems to be inhaled with the pure air of the ancient Ionia. Nowhere in the Levant was there so much hospitality and gaiety,—nowhere was the Romaica (the Dædalian dance described by Homer) danced so frequently or so well. All travellers were struck by this exhibition of happiness. Doctor Chandler, who visited Scio in 1764, dwells with much complacency on the subject: he mentions the beauty of the women, their gay dresses, their turbans made of linen so white and thin that it seemed snow, their short petticoats reaching to the knee, with the white silk hose beneath them, and he praises their frankness and cheerfulness. They were sitting at the doors of the houses knitting and spinning, and courteously saluted the traveller as he passed. Another classical traveller, the late Hon. F. S. North Douglas, who saw them on a holiday, has left a description of their dance, which is very correct and better than any other account of the Romaica we are acquainted with. He says, "I never shall forget the first time I saw this dance: I had landed on a fine Sunday evening, in the island of Scio, after three months spent amidst Turkish despotism, and I found most of the poorer inhabitants of the town strolling upon the shore, and the rich absent at their farms; but in riding three miles along the coast to visit what is falsely called the School of Homer, I saw about thirty parties engaged in dancing the Romaica upon the sand: in some of these groups the girl who led them chased the retreating wave, and it was in vain that her followers hurried their steps, some of them were generally caught by the returning sea, and all would court the laugh rather than break the indissoluble chain. Near each party were seated a group of parents and elder friends, who re-kindled the last spark of their expiring gaiety and vigour in the happiness they saw around them. * *

The shield of Achilles presents us with the image of this Grecian festivity, which has been continued in all its beauty to this day:—

'A figured dance succeeds: such once was seen
In lofty Gnosus, for the Cretan queen
Formed by Dædalian art: a comely band
Of youths and maidens, bounding hand in hand,
The maids in soft cymars of linen drest,
The youths all graceful in the glossy vest;
Of those *the locks with flowery wreaths* inrolled,
Of these the sides adorn'd with swords of gold,
That, glitt'ring gay, from silver belts depend.
Now all at once they rise, at once descend,
With well-taught feet, now shape in oblique ways,
Confus'dly regular, the moving maze:
Now forth at once, too swift for sight, they spring,
And undistinguish'd blend the flying ring;
So whirls a wheel, in giddy circles tost,
And rapid as it runs the single spokes are lost*.'

"Graceful and splendid as this poetical description is, it loses nothing by reality. The Romaica, the usual dance of the islanders in the Archipelago, has thus been faithfully represented by Homer, and any account which I can give of it will be little more than a feeble copy of the beautiful picture he has drawn.

"Whether they meet within the corridor of the house, or around some favourite well and agiasma†, no evening passes, in the summer months, that the young people of both sexes, adorned with all the simple finery of garlands and flowers, and their hair floating in primitive luxuriance on their necks, do not assemble to dance the Romaica. The music generally consists of violins and rustic pipes, and the time begins by slow and distinct notes, and increases, with the spirits of the dancers, into the most lively and animating measures. They move, holding each other by the hand, in a circle, composed alternately of young men and girls; and the dance is led by some nymph, chosen from the rest for her grace or beauty, who holds one extremity of a handkerchief, while the other is in the hand of the Coryphæus of the youths.

"They begin in measured and slow steps till they have gained the time, but by degrees the air becomes more sprightly; the conductress of the dance sometimes setting to her partner,—sometimes darting before the rest, and leading them through the most rapid evolutions;—sometimes crossing under the hands which are held up to let her pass, and giving as much liveliness and intricacy as she can to the figures into which she conducts her companions, while their business is to follow her in all her movements without breaking the chain or losing the measure. * * * This Cretan dance was composed in imitation of the labyrinth of which the same Dædalus was the artist, and it expresses fairly enough by its windings the intricacies of that celebrated cavern. The evolutions, also, which resemble the order in which a flight of cranes follow their conductor, have given it, not unaptly, the name of Γεράνος,—the crane‡."

It is in the dance that the costume of the Greek islanders is seen to best advantage, and nowhere were the "flowery wreaths" to entwine in the locks furnished so abundantly as at Scio, the whole eastern face of which was a complete garden. There were the sweet blossoms of the lemon, the orange, and the citron trees, and glorious rose-bushes;—and jasmines, carnations, and myrtles were interspersed with olive and palm trees, and cypresses. We visited the island in the days of its desolation, but these lovely features still remained,

* Homer: Iliad, book xviii.

† The agiasmata, or holy fountains, are among the most classical superstitions of the modern Greeks. They are generally situated in romantic and solitary nooks, the neighbourhood of a cavern or a grove being usually deemed requisite accessories.

‡ An Essay on certain Points of Resemblance between the Ancient and Modern Greeks.

though "gone were the hands that culled the flowers;" and we had not the opportunity of witnessing the Homeric dance in the island which was the old poet's birth-place, or which, at least, is one of the claimants to that honour.



[Woman of Trikeri, in Thessaly.]

In continental Greece, the women of Trikeri are distinguished by their beauty and the gracefulness of their costume. Trikeri is a maritime town within the confines of ancient Thessaly, about fifteen miles to the north-east of the famed pass of Thermopylæ, and near to the island of Skiathos. The classical river Peneus, which carries off the waters of all the rivers and torrents of Thessaly,—the celebrated Vale of Tempé,—Mounts Pelion and Ossa,—the plain of Pharsalia, where Cæsar conquered Pompey,—are all in the neighbourhood of Trikeri, while Mount Parnassus shows his Alpine, forked summit in the distance. The men of this district, and of nearly all Thessaly, though less stern in their aspect than the Albanians, resemble them in their rich costume and in their manner. The Thessalians of ancient days were distinguished among the Greeks by their extreme fondness for splendid attire. The greater part of the plain of Thessaly is exceedingly well cultivated: the people are industrious; and an export-trade in raw silks and coarse-manufactured cottons has introduced more prosperity than is generally found in Greece. In that country, as in Italy, wherever the degree of trade and prosperity is high, the women are found to be good-looking and tastefully dressed. In many parts of the Morea, where there is no commerce at all, and very little industry, the women are hideous, and clothed in rags.

Larissa, Tornavo, and Triccala are the chief towns of modern Thessaly. Before the late wars, Larissa contained a population of about 20,000 souls.

Resolution.—Tranquillity consisteth in a steadiness of the mind; and how can that vessel, which is beaten upon by contrary waves and winds, and tottereth to either part, be said to keep a steady course? Resolution is the only mother of security.—*Bishop Hall.*

POLITICAL ECONOMY OF OUR ANCESTORS.

No. IV.

EVEN so recently as towards the beginning of the last century, the policy of interfering with the coin of the realm, by diminishing its weight or debasing the quality of the metal, did not want defenders among intelligent persons, as a proper expedient for the government to resort to when in want of money. In 1696 Mr. Nicholas Barbon, the author of several other able tracts on mercantile affairs, published 'A Discourse concerning Coining the New Money lighter,' which contains much ingenious, novel, and correct speculation on many of the great principles of commerce and finance, but the chief object of which is to lay down and enforce the doctrine, that it is in the power of the government to give any value it pleases to the coin it issues merely by the stamp it impresses upon it. The oldest argument in refutation of this error which is commonly referred to, at least in our own language, is a speech of Sir Robert Cotton, delivered in the Privy Council in 1626, which is printed among his works.

In the Dialogue before us, however, published nearly half a century earlier, we find the same sound views as those of Sir Robert Cotton inculcated and explained with great clearness. The Knight, however, cannot comprehend the force of the argument. "Seeing the coin," he asks, "is but a token to go from man to man, and, when it is stricken with the prince's seal, to be current, what maketh it of matter what metal it be made of—yea, though it were but leather or paper?" The anticipation of a paper-currency at this early period is curious. Nothing can be better than the Doctor's reply. "You say," he observes, "but as most sort of men do say, and yet they be far wide from the truth, as men that do not consider the thing groundly; for by that reason God would never send dearth among us but the prince might quickly remedy it. As, if corn were at a crown a bushel, the prince might provide crowns enough for himself and also his subjects, made of brass, to pay for the same; and so to make it as easy for him and his subjects to pay a crown of such metal for a bushel as it should be for them now to pay a penny for the same: and as the price of corn doth rise, the prince might raise the estimation of his coin after the rate, and so keep the coin always at one estate indeed, though in name it should seem to rise. But ye may see daily by experience the contrary hereunto; for when God sendeth dearth, either of corn or of other things, there is neither emperor nor king can help it, which they would gladly do if they might, as well for their own ease as for their subjects', and might soon do it if your reason afore touched might take place; that is, if either they might make coin of what estimation they would of vile metals, or else enhance the value of coins made in metals of price to what sum they would. Yet a man at the first blush would think that a prince in his realm might do this easily, and make what coin he would to be current, and of what estimation it pleased him. But he that so thinketh marketh but the terms, and not the things that are understood by them; as if a man made no difference between six groats that made an ounce of silver, and twelve groats that made in all but an ounce of silver. By the groat of the first sort the sixth part of an ounce, and by a groat of the other sort is the twelfth part of an ounce of silver understood; and so there must be as much difference between the one groat and the other as is between two and one, the whole thing and the half, though either of both be called but under one name,—that is, a groat. We must consider though gold and silver be the metals commonly wherein the coin is stricken to be the tokens for exchange of things between man and man, yet it is the wares that are necessary for man's use that are ex-

changed indeed, under the outward name of the coin, and it is the rarity and plenty of such wares that makes the price thereof higher or baser."

He then proceeds to explain the reasons why money is employed rather than direct barter, and why gold and silver make the most convenient money. These metals, he says, are deemed the most valuable partly for their excellency above others in real utility, partly for their greater rarity. The advantage of having the coins stamped, by which people are saved the trouble of weighing them, as they had to do at first, is next noticed. It was this useful improvement, nevertheless, it is observed, that first gave rise to attempts to debase the currency. Originally, sovereigns always stamped upon each coin its real weight. "As soon as they attempted to do otherwise," continues the speaker, "that is, to mark the half pound with the mark of the pound, and the half ounce with the mark of the ounce, awhile their credit made their coins current, as I read, among the Romans practised more than once; but as soon as it was espied, the two prices of half pounds went no farther than the one price of a whole pound went before. And at length, as much as they won at first they lost at the last in payment of their rents, customs, and duties. And so, the nearer east, the farther from west. And they consequently lost their credit; much as I have known certain towns in England to have done, which were wont to make their cloths of a current breadth and length, and to set their seals to the same; while they kept the rate truly, strangers did but look on the seal, and receive their ware, whereby these towns had great vent of their cloths, and consequently prospered very well. Afterward, some in these towns, not contented with reasonable gains continual, and desiring more, devised cloths of less length, breadth, and goodness, than they were wont to be, and yet, by the commendation of the seal, to have as much money for the same as they had before for good cloths; and for a time they gat much, and so abased the credit of their predecessors, to their singular lucre, which was recompensed with the loss of their posterity. For after these cloths were found faulty for all their seals, they were not only never the better trusted, but much less, for their seal; yea, though their cloths were well made; for when their untruth and falsehood was espied, then no man would buy their cloths till they were ensearched and unfolded, regarding nothing the seal: and yet because they found them untrue in some part, they mistrusted them in other; and so would give less for those cloths than for any other like having no seals to the same; whereby the credit of the said towns was lost, and the towns utterly decayed."

The argument then proceeds with the Knight still denying that through the debasement of the coin there is any loss to the community on the whole. And the Doctor admits that there are some persons, and even some classes of persons, who are not directly injured by a debasement of the coin. To one sort of men, he observes, it is no loss; to another it is actually a gain. But to the mass of the people it is a decided loss, "yea generally, to the utter impoverishing of the realm, and weakening of the Queen's majesty's power exceedingly." Those that suffer no loss, he explains, are they that live by buying and selling; those that are gainers are all that have takings [leases] or farms at the old rents. The losers are "all noblemen, gentlemen, and all other that live either by a stented [fixed] rent or stipend, or do not manure [cultivate] their ground, or do occupy no buying or selling." As an illustration of the additional expenses to which such persons had come to be subjected, he observes that, "where forty shillings a year was honest wages for a yeoman afore this time, and twenty pence a week board wages was sufficient, now double as much will scant bear their charge."

What follows presents some curious notices of the manners and fashions of the time. "That," interposes the Knight, "is long of their excess, as well in apparel as in fare; for now-a-days serving-men go more costly in apparel, and daily to fare more daintily, than their masters were wont to do in times past." "No doubt," answers the Doctor, "that is one great cause of the greater change of household. For I know when a serving-man was content to go in a Kendal coat in summer, and a frize coat in winter; and with a plain white hose, made meet for his body; and with a piece of beef, or some other dish of sod meat, all the week long. Now he will look to have at the least for summer a coat of the finest cloth that may be gotten for money, and his hosen of the finest kersey, and that of some strange dye; as Flanders dye, or French pinke, that a prince or great lord can wear no finer, if he wear cloth. Then their coats shall be guarded, cut, and stitched; and the breeches of their hose so drawn with silk, that the workmanship shall far pass the price of the stuff. * * * I think we were as much dread, or more, of our enemies, when our gentlemen went simply, and our serving-men plainly, without cuts or gards, bearing their heavy swords and bucklers on their thighs, instead of cuts and gards, and light dancing swords; and, when they rode, carrying good spears in their hands, instead of white rods, which they carry now, more like ladies or gentlewomen than men; all which delicacies maketh our men clean effeminate and without strength."

The speaker is made to go on inveighing against these changes with much acrimony for some time longer. We may learn from this passage how old is the complaint we are still in the habit of hearing in many quarters, of the increase of expensive and luxurious habits among the humbler classes of society. To be sure, this complaint is not very consistent with another note of lamentation as commonly taken up by the same order of reasoners, to the effect that the mass of the people are, as to all the accommodations of life, much worse off now-a-days than they were of old. In this part of his work our author does not show much of the liberality and good sense which generally mark his speculations. No doubt whatever can be entertained that the labouring classes, as well as all other ranks of the community, have in this country been every generation for some centuries past attaining more and more of a command over both the comforts and the necessities of existence. Our author's account of the increase that had taken place within his experience, both in the earnings and in the expenses of servants, is most probably not at all exaggerated. And in like manner the domestic servants of the present day, generally speaking, both receive higher wages, and live and dress better than their predecessors did thirty or forty years ago. But so far is this change from being matter for regret, that it is the very surest as well as most desirable indication that could be presented of the augmented prosperity of the country. It proves that the fertilizing influences which constitute the national wealth have penetrated deep into the soil of society, and enriched it through and through. And if there be any one portion of the community in particular, which a truly enlightened and benevolent mind would wish to see enjoying the benefit of improved circumstances, surely it must be that portion which lies at the base of the whole. Any rise here implies the elevation of the entire mass of the social edifice.

The native good sense of the author of the Dialogue, although not proof against all the prejudices of his time, and indeed we may say of times long subsequent to his own, will not allow him to go the whole length with the outcry against the increase of luxury and refinement. "Then what say you," the Knight next

asks, "by our buildings that we have here in England of late days, far more excessive than at any time heretofore? Doth not that impoverish the realm, and cause men to keep less houses?" To which the Doctor replies, "I say that all these things be tokens and ornaments of peace, and that no doubt is cause of less households. * * But it doth not impoverish the realm at all; for all the expenses of buildings, for the most part, is spent among ourselves and amongst our neighbours and countrymen." He objects indeed to the gilding or painting of houses, and also to "the arrasses, verderess, and tapestry works wherewith they be hanged commonly," as coming from Flanders and other strange countries. It had not yet been discovered, and indeed it is even now far from being universally understood, that the continued purchase by a country of commodities, even in a foreign market, cannot go on without encouragement being thereby afforded to native industry. Where is the money so laid out to come from, unless from the labours of the people at home?

The Doctor's grand remedy, as has been already intimated, for the evils which he has thus endeavoured to trace to their source, is the establishment in the country of arts and manufactures for the supply of those commodities by native industry for which England was then dependent upon other countries. It is true that he proposes to accomplish this object, in the first instance at least, by means of a system of prohibitions against the admission of foreign manufactured goods; but whatever may be thought of the application of such a forcing process in any circumstances, nothing can be sounder, at all events, than the views the Speaker expresses as to the importance of the object proposed, and the desirableness of effecting it. The Knight objects that "many wise men think it better that all our wool should be sold over unwrought than any clothiers should be set a-work withal within this realm." "That were a strange thing," exclaims the other, "in mine opinion, that any man should think so; and what should move them to be of that opinion, I pray you?" "I will tell you," answers the Knight; "they take it that all insurrections and uproars for the most part do rise by occasion of these clothiers;" whenever sale is slack, he adds, the manufacturing population are apt to grow discontented and tumultuous, so that considerate persons "think it were better that there were none of them in the realm at all, and consequently that the wool were uttered unwrought over sea than to have it wrought here." The Doctor's reply to this is as good as can be. "So it may seem," he says, "to them that considereth one inconvenience, and not another. Surely, whosoever hath many persons under his governance shall have much ado to govern them in quietness; and he that hath a great family shall have sometimes trouble in ruling of them. It were but a mean policy either for a prince to diminish his number, or for a master of a house to put away his servants, because he would not have any trouble with the governance of them; he that would do so might be well resembled to a man that should sell his land because he would not be troubled with the accompt of it." He afterwards adds, "They have in France more handycrafts occupied, and a greater multitude of artificers than we have here by a great deal; and for all that they have made many great stirs and commotions there before this, yet they will not destroy artificers, for they know that the highest princes of them all, without such artificers, could not maintain their estate." And again: "And what riches they bring to the countries where they be well used, the country of Flanders and Germany do well declare, where through such occupations it hath so many and else so wealthy cities that it were almost incredible so little ground to sustain so much people. Wherefore in my mind they are far wide of right consideration that

would have either none or else less clothing within this realm, because it is sometime occasion of business and tumults which cometh for lack of vent. There is nothing every way so commodious or necessary for man's use, but it is sometimes by ill handling occasion of some displeasure,—no, not fire and water, that be so necessary as nothing can be more."

The Knight objects that, in France, they have diverse bands of men in arms, in diverse places of the realm, to repress such tumults quickly if any should arise: "if we had the like here," he says, "we might be bold to have as many artificers as they have." "God sworebote," the former breaks out, the instinct of his English jealousy and impatience of oppression kindling at this proposal, "that ever we should have any such tyrants come among us!" The Merchant adds that, in his opinion, the introduction of such an armed police "would rather be an occasion of commotions to be stirred than to be quenched; for the stomachs of Englishmen would never bear to suffer such injuries and reproaches as he heard that such used to do to the subjects of France which in reproach they call peasants." The Doctor joins in the common sentiment: "I would not," he says, "have a small sore cured by a greater grief; nor for avoiding of popular sedition, which happeneth very seldom, and soon quenched, to bring in a continual yoke and charge both to the prince and the people."

The Third Dialogue is much shorter, and will require but a very short notice. It is in fact little more than merely a recapitulation or summing up of what has been already said. The high prices and other evils of which they had been discoursing are all traced by the Doctor to the debasement of the currency.

Solitude.—He had need to be well underlaid that knows how to entertain the time and himself with his own thoughts. Company, variety of employments or recreations, may wear out the day with the emptiest hearts; but when a man hath no society but of himself, no task to set himself upon but what arises from his own bosom, surely, if he have not a good stock of former notions, or an inward mint of new, he shall soon run out of all, and, as some forlorn bankrupt, grow weary of himself.—*Bishop Hall.*

First Attempts.—"It will do" is a very bad saying. What costs little labour seldom deserves praise; if we acquire the habit of thinking that performances are already well enough while we have the power of making them still better, we shall gradually bestow less and less pains, and still content ourselves with their execution. The sheet of paper is still extant on which Ariosto wrote an octave describing a tempest in sixteen different ways, and it was the last which was preferred. Tasso found rhymes with great difficulty. Yet these were men of genius. Who, with such examples before them, ought to be contented with first efforts? It will generally be found that what is called genius may be resolved into the union of a strong taste for some particular study or art with great industry in mastering it. The possessor rarely says of an indifferent performance "It will do." I have seen an easel inscribed with the salutary motto "Try again," which perhaps often shamed its owner out of laziness and despondency; and the same motto is carried by most geniuses in their hearts. We all know how thankless are the services of those who carry the principle "It will do" into their familiar intercourse with others; how niggardly is the kindness which it promotes—how scant the good offices which it sanctions.

Self-Devotion.—Sir David Baird having been taken prisoner by Hyder Ally, was, with other British officers, thrown into prison at Seringapatam, where the sufferings and indignities he endured were dreadful. The wounds he had received were unhealed, and almost in a state of mortification, and his health was rapidly declining. When he and his unfortunate companions had languished for some time in confinement, the myar made his appearance one

day, bearing with him fetters weighing nine pounds each, which were destined for the unhappy prisoners. Resistance was useless, and they submitted to their fate. But when the myar came to Sir David Baird's turn, one of the officers, Lieutenant Lucas, sprang forward and urged the cruelty of manacled limbs still festering with wounds, from one of which the ball had been so recently extracted, and that he doubted not that death would be the certain result of such treatment. To these representations the myar replied, that the circar had sent as many fetters as prisoners, and that they must all be put on. "Then," said this noble officer, "put a double pair on me, so that Captain Baird may be spared wearing them." Even the myar, though used to scenes of human misery, was moved at this act of self-devotion, and he consented to refer the case to the kedadar, who would open the book of fate. Fortunately for Sir David Baird the book of fate was propitious—the irons were dispensed with—and thus was this man, then a captive in the dungeons of Seringapatam, spared to become one day its conqueror and its temporary master!

PATRIOTIC EFFUSION TO BRITAIN.

(From *Montgomery's Poems.*)

I LOVE thee, O my native Isle:
Dear as my mother's earliest smile,
Sweet as my father's voice to me
Is all I hear and all I see.
When, glancing o'er thy beauteous land,
In view thy *Public Virtues* stand,
The guardian angels of thy coast,
Who watch the dear *domestic Host*,
The *Heart's Affections*, pleased to roam
Around the quiet heaven of home.

I love thee,—when I mark thy soil
Flourish beneath the peasant's toil,
And from its lap of verdure throw
Treasures which neither Indies know.

I love thee,—when I hear around
Thy looms, and wheels, and anvils sound,
Thine engines heaving all their force,
Thy waters labouring on their course,
And arts, and industry, and wealth,
Exulting in the joys of health.

I love thee,—when I trace thy tale
To the dim point where records fail:
Thy deeds of old renown inspire
My bosom with our fathers' fire;
A proud inheritance I claim
In all their sufferings, all their fame:
Nor less delighted when I stray
Down history's lengthening, widening way,
And hail thee in thy present hour,
From the meridian arch of power,
Shedding the lustre of thy reign,
Like sunshine, over land and main.

I love thee,—when I contemplate
The full-orb'd grandeur of thy state;
Thy laws and liberties, that rise,
Man's noblest works beneath the skies,
To which the Pyramids were tame,
And Grecian temples bow their fame:
These, thine immortal sages wrought
Out of the deepest mines of thought!
These, on the scaffold, in the field,
Thy warriors won, thy patriots seal'd.
—Can words, can numbers count the price
Paid for this little paradise?
Never, oh! never be it lost;
The land is *worth* the price it cost.

I love thee,—when thy Sabbath dawns
O'er woods and mountains, dales and lawns,
And streams that sparkle while they run,
As if their fountain were the sun:
When, hand in hand, thy tribes repair,
Each to their chosen house of prayer,
And all in peace and freedom call
On Him who is the Lord of all.

* * The Office of the Society for the Diffusion of Useful Knowledge is at
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THE SPRINGER ANTELOPE.



[Hunting the Springbok at the Cape of Good Hope.]

THE springer antelope, or springbok (buck) of the Cape of Good Hope, is a beautiful species of the genus or family of the antelope. Though the number of species of antelopes is large, and almost all of them distinctly marked from each other, it is only recently that they have been classed as a genus. M. Pallas was the first who pointed out the difference between the antelope and the goat clearly and distinctly, and during his researches he identified and described twenty-two species, which number has been since increased to sixty-six by the labours of more recent zoologists*.

The antelope represented in the engraving is one of the most beautiful, if not indeed the most beautiful, of the various species of antelopes which inhabit Southern Africa. It has received from the Dutch colonists the name of springbok, from the bounding leaps which it takes, and also pronkbok, showy or beautiful buck, from the colours which it discloses in leaping. This latter effect is caused by two folds of the skin, which, ascending from the root of the tail, and terminating upon the croup, dilate when the animal is bounding, and expose a large triangular space, otherwise concealed, of pure white-coloured hair, edged by two dark streaks. The head of the animal is rather short, with somewhat of the expression of a lamb: the neck is slender, the body comparatively bulky, and the legs slender and

elegantly turned. It is larger than the gazelle, but of the same make and colour.

Major Hamilton Smith's description of the springbok is vivid and interesting. "It resides," he tells us*, "on the plains of South Africa, to an unknown distance in the interior, in flocks, assembling in vast herds, and migrating from north to south, and back with the monsoons. These migrations, which are said to take place in their most numerous form only at the intervals of several years, appear to come from the north-east, and in masses of many thousands, devouring, like locusts, every green herb. The lion has been seen to migrate, and walk in the midst of the compressed phalanx, with only as much room between him and his victims as the fears of those immediately around could procure space by pressing outwards. The foremost of these vast columns are fat, and the rear exceedingly lean, while the direction continues one way; but, with the change of the monsoon, when they return towards the north, the rear become the leaders, fattening in their turn, and leaving the others to starve, and to be devoured by the numerous enemies who follow their march. At all times, when impelled by fear, either of the hunter, or the beast of prey darting among the flock, but principally when the herds are

* Cuvier's 'Animal Kingdom,' by Griffiths and Hamilton, vol. iv.

assembled in countless multitudes, so that an alarm cannot spread rapidly, and open the means of flight, they are pressed against each other, and their anxiety to escape impels them to bound up in the air, showing at the same time the white spot on the croup dilated by the effort, and closing again in their descent, and producing that beautiful effect from which they have obtained the name of springer and showy bok."

In the first volume of the 'Menageries,' in the 'Library of Entertaining Knowledge,' there are a number of interesting particulars, some of which were communicated by the late Mr. Pringle, respecting the migrations of the springbok. The author of that volume remarks, "The migrations of innumerable companies of springboks from unknown regions in the interior of Africa to the abodes of civilization are amongst the most extraordinary examples of the fecundity of animal life. The vast quantity of a species of birds of South America, which produce the *guano* (a manure) in sufficient abundance to be a great article of commerce—the flocks of pigeons of North America—the locusts of Africa—are not more striking than the herds of springboks."

Captain Stockenstrom, a native of the Cape, in a letter addressed to Mr. Pringle, which was afterwards appended as a note to Mr. Thompson's 'Travels,' and is also given in the volume of the 'Menageries' alluded to, says, "It is scarcely possible for a person passing over some of the extensive tracts of the interior and admiring that elegant antelope, the springbok, thinly scattered over the plains, and bounding in playful innocence, to figure to himself that these ornaments of the desert can often become as destructive as the locusts themselves. The incredible numbers which sometimes pour in from the north, during protracted droughts, distress the farmer inconceivably. Any attempt at numerical computation would be vain; and by trying to come near the truth, the writer would subject himself, in the eyes of those who have no knowledge of the country, to a suspicion that he was availing himself of a traveller's assumed privilege. Yet it is well known in the interior that, on the approach of the *Trek-bokken*, as these migratory swarms are called, the grazier makes up his mind to look for pasture for his flocks elsewhere, and considers himself entirely dispossessed of his lands until heavy rains fall." Captain Stockenstrom accounts, in the following apparently satisfactory manner, for the cause of the migrations of the springbok. The immense desert tracts between Orange River and the colony of the Cape, westward of the Zeekoe River, though destitute of permanent springs, and therefore uninhabitable by human beings for any length of time, are, notwithstanding, interspersed with stagnant pools, and *vleys*, or natural reservoirs of brackish water, which, however bad, satisfies the game. In these endless plains the springboks multiply, undisturbed by the hunter (except when, occasionally, the Bosjesman destroys a few with his poisoned arrows), until the country literally swarms with them; when, perhaps, one year out of four or five, a lasting drought leaves the pools exhausted, and parches up the soil naturally inclined to sterility. Thus want, principally of water, drives those myriads of animals either to the Orange River or to the Colony, when they intrude in the manner described. But when the thunder-clouds burst on the parched-up country, the swarms again retreat to their more sterile but peaceful and secluded plains.

Mr. Pringle once passed through a migratory swarm scattered over the grassy plains near the Little Fish River. He could not profess to estimate their numbers;—he says they *whitened*, or rather *speckled* the country as far as the eye could reach. A gentleman riding with him, better acquainted than Mr. Pringle with such scenes, affirmed that, within view, there could not be less than 25,000 or 30,000.

Mr. Pringle describes the springbok as easily tamed when caught young. It is occasionally reared as a plaything for the children at the farms of the colonists*.

The following extract from the work of the Rev. C. J. Latrobe, who paid a missionary visit to South Africa in 1816, is introduced for the sake of the right-hearted feeling which marks it:—

"Here we were amused by the sight of some hundreds of springboks, one of the most elegant antelopes of this country. They stood in parties of twenty or thirty together, and our sportsmen were all alive, endeavouring to approach near enough to make sure of their aim. But all attempts were vain: the bucks suffered them to approach to within gun-shot, when they set off full speed, leaping sometimes over each other. They bounded along, in a species of dance, springing with all four feet at once from the ground, then, swiftly facing about, surveyed their pursuers. Sixteen shot were fired at them, but not in a single instance did it appear that one had been wounded. This afforded me great pleasure; for as we had no dogs to run down and secure any one that might have had a leg broken, or been otherwise hurt, it must have given pain to any feeling mind to know that the poor animal was lamed, and grievously suffering, without benefit to us, and would most likely be made the prey of some cruel ravenous beast. Could we have obtained one of them for our subsistence, the killing of it would have been excusable. The shot fired contributed, though not to our gain, yet to our pleasure, for it set them in motion, and the swiftness and elegance of their movements were well worth observing."

A correspondent, formerly resident at the Cape, and who has presented us with the drawing from which the cut in p. 193 was made, furnishes us with the following additional particulars respecting the habits and the chase of this animal:—

"The springbok, like the hare, conceals itself in cover during the day, and resorts to the open plain in the evening and at night, for the purpose of feeding only. The Cape antelope, in fact, perfectly resembles the hare in all its characteristics. It lies continually in its form,—leaving it only to procure food, or to escape from its enemies.

"The bok is shot in great numbers by the Dutch boors. This sport is usually pursued on horseback, and in the heat of the day. The animal is then lying in its habitual lair, and, on being disturbed by the sportsman, springs from it with a succession of bounds, than which nothing can be more beautiful or graceful.

"The Dutch boor is generally an unerring shot; but in case the antelope should be only wounded, the buck-dog (a species of large mongrel) is always at the heels of his master's horse, and, at the report of his gun, darts forward and secures the animal. It is then placed behind the saddle, in the way shown in the drawing.

"The horse used in buck-shooting is the hardy and serviceable animal common to the country. Many of them are so well trained, that they stop the instant the bok gets up, but in most cases a slight check is necessary; the rein is then dropped on the neck, and the horse is motionless. The annexed sketch gives an accurate representation of the common Cape horse."

PURPLE AND SCARLET DYES OF THE ANCIENTS.

From the Notes to the 'Pictorial Bible.'

GOGUET and Heeren have respectively brought together much interesting information with regard to the purples of antiquity. From their works (to which we may refer for more detailed accounts) the following particulars are chiefly drawn. The pre-eminence given at the present day to purple as a royal colour, is undoubtedly a result of the ancient preference which arose when the relative superiority of purple to other colours was greater than at present. We have seen this colour frequently mentioned in connexion

* 'Menageries,' vol. i.—Library of Entertaining Knowledge.

with the works of the tabernacle and the dress of the high-priest; and among the heathen we know that the colour was considered peculiarly appropriate to the service of the gods. The Babylonians and other nations used to array their gods in robes of purple. A persuasion was even entertained that in the purple dye there lay some peculiar virtue for appeasing the wrath of the gods. Purple was also the distinguishing mark of great dignities among several nations. It is said that when the beautiful purple of Tyre was first discovered, the sovereign to whom it was presented appropriated it as a royal distinction. Homer intimates that it was only worn by princes; and this limitation of its use was common among other nations. A very early notice of this occurs also in Scripture, where the kings of Midian, defeated by Gideon, are described as being clad in purple raiment. (Judges viii. 26.) It seems to us very likely that, as there were several purples held in various degrees of estimation, it was only some particular shade of purple that was reserved for a godlike or royal distinction. It is important to understand that the word "purple" in ancient writings does not denote one particular colour. Pliny mentions the difference between some of the purples: one was faint, approaching to our scarlet, and this was the least esteemed; another was a very deep red, approaching to violet; and a third was of a colour compared to that of coagulated bullock's blood. The most esteemed Tyrian purple seems to have been of this last colour. We say "the most esteemed," because it appears that even the Tyrian purple was not one particular colour, but a class of animal dyes, as distinguished from vegetable—varying in shade of purple from the most faint to the most intense. It is to be understood, however, that all the Tyrian purples were more esteemed than other colours, although they differed in degree of value. Of the vegetable purples we know nothing. Most of our information relates to the purples of the Phœnicians. Whether theirs was the "purple" of the text it is impossible to determine, but it is not unlikely, as their discovery of this colour, or class of colours, is of very remote antiquity; and, at all events, a short statement concerning the Tyrian purples will be generally applicable, as they were doubtless as much esteemed, whenever they became known, by the Hebrews as by other nations; and they may be understood as the "purples" in future portions of the sacred books, if not in the present. These dyes were obtained from several varieties of shell-fish, comprehended under two species: one (*Buccinum*) found in cliffs and rocks; and the other (*Purpura*, or *Pelagia*), which was the proper purple-fish, taken by fishing in the sea. These fish were found on the coasts of the Mediterranean and Atlantic, and locally differed in the tint and value of the dye which they furnished. The Atlantic shells afforded the darkest colour; those on the Italian and Sicilian coasts a positive violet or purple; and those of the Phœnician shore itself, and in general the southern coast of the Mediterranean yielded scarlet colour. The most celebrated in the Mediterranean were those from the coasts of Sicily and the Peloponnesus; and in the Atlantic, those from the shores of Britain. The dyeing matter must have been very expensive, as each fish only furnished a very minute quantity of juice, pressed from a white vein or vessel in the neck, and which could only be obtained while the animal was alive. The rest of the fish was useless. The juice of this fish is not now used in dyeing; the art of preparing it is lost, apparently in consequence of as good or better dyes having been discovered, which can be obtained with much less trouble and expense. The Phœnicians excelled all other people in the use of this colouring matter, whence arose the great fame which the purples and scarlets of Sidon and Tyre enjoyed in ancient times; so that they were much in request among great people, and formed the prevailing fashion among the higher ranks of society. The beauty and variety of colours, it would seem, was more the result of art than a natural property of the material. The desired hue was obtained by the application of differently-tinted juices, the hue being varied by the order of application. The mixing and preparation required for the intended result was a work demanding much care and skill; the process being of course varied according to the hue to be obtained. The Phœnicians are also understood to have possessed the art of throwing a peculiar lustre into their colours by making other tints play over it, producing what is called a "shot colour." This perhaps was the great secret of their art. The most esteemed purple stuffs were those which were "twice-dyed;"

and as this seems to be noticed in the sacred text as a distinction of the stuffs there mentioned, we might take this as an intimation that the dyes were Phœnician; but on this point it is not necessary to insist. The Phœnician dyeing seems to have been at all times performed in the wool. It appears that the purple dye was applied to all sorts of stuffs, linen, cotton, and, in later times, silk; but its most usual application was to woollen, which, being manufactured from the fine wool of Arabia, possessed a value not entirely owing to the rich dye with which it was imbued. It was probably the merit of the fabric and the colour combined which obtained for the dyed stuffs of Tyre the high reputation which they would not have enjoyed on either account separately.

There has been some difference of opinion about scarlet. Some think that it is merely one of the Phœnician purples produced from the shell-fish; for it is certain that among the number was a bright colour, approaching either to a crimson or scarlet, and which seems to have been held in considerable esteem. Others, who do not contend on this point, hesitate to say whether crimson or scarlet is intended by the word in the text, and by its equivalents in other languages. Besides the dye produced by the murex, a crimson or scarlet colour was known in ancient times, obtained from an insect akin to the American cochineal, but producing a much inferior colour. This insect was called *kermes* (whence our words *carmine*, *crimson*) by the Arabs; and *coccus* by the Greeks and Romans. The female insect is about the size and shape of a pea, of a deep violet colour powdered with white, found chiefly on the leaves of a species of evergreen oak shrub (*ilex aculeata*), which is found in different parts of Western Asia and the south of Europe. Now that the colour afforded by this insect was the "scarlet" of Moses seems tolerably clear. The word rendered "scarlet" in the text and elsewhere in the books of Moses is either simply *tola* or *tola schani*. *Tola* means a worm, and, according to the analogy in the use of the word *kermes*, would literally be rendered "worm-dye;" the *schani* sometimes annexed is variously interpreted to mean either doubled dye (as the best scarlets seem to have been), or, according to another derivation, bright, deep-red dye. The terms together seem sufficiently to point out a species of *coccus*—doubtless the *coccus ilicis*. It is so understood by the Septuagint and Vulgate; the former rendering the original by *κοκκος*, and the latter by the same word in the Latin form of *coccus*. Professor Tychsen says that *tola* was the ancient Phœnician name for this dye used by the Hebrews, and even by the Syrians; and it is employed by the Syrian translator in Isaiah i. 18. After the captivity, the Jews more commonly used the Aramæan word *zehori*. The same learned orientalist thinks that the dye was discovered by the Phœnicians; and if so, and if they were the great managers of this as well as of the purple dyes, it would be useful to ascertain the difference in application, appearance, and quality between this and the purple scarlet. Was their famous scarlet *this*, or that produced by the shell-fish? We incline to think that it was the *coccus*, and that the most scarlet of the fish dyes was only used in modifying the purples. And we arrive at this conclusion, because while a "scarlet" is mentioned as the basis of the ancient purples, *this* scarlet is always noticed as something distinct from the purples. We imagine the distinction between the two to have been that the purple "scarlet" was crimson, whilst the *kermes* "scarlet" was the real scarlet, or perhaps more properly *vermilion* (the worm colour). Professor Tychsen, supposing the identity of the Scripture "scarlet" with the *kermes* established, properly concludes that the *kermes* dye was known before the time of Moses;—that the dye was known to the Egyptians in the time of Moses; for the Israelites must have carried it along with them from Egypt;—that the Arabs received the name "kermes," with the dye, from Armenia and Persia, where it was indigenous, and had been long known; and that that name banished the old name in the east, as the name "scarlet" has in the west. The *kermes* were perhaps not known in Arabia; at least they were not indigenous, as the Arabs appear to have had no name for them. *Kermes* signifies always *red dye*; and when pronounced short it becomes *deep red*. Beckmann thinks that in later times the Tyrian purples were superseded by the improvements of this dye; but we do not feel satisfied with his authorities for this conclusion. The *kermes* itself has now long been superseded by the American cochineal, which is far superior to any pigment employed in

ancient times for dyeing reds. Indeed we have perhaps little cause to regret the loss or disuse of any ancient dye, particularly in bright reds, which owe so much to discoveries of chemistry; that we have every reason to conclude them infinitely superior to any which ancient art could produce. Pliny complains that scarlet dyes could not be

made sufficiently durable and adhesive; and the statements in ancient authors as to the brilliancy of scarlet may be admitted by recollecting that they had nothing better with which to compare it. The Roman sumptuary laws allowed anybody to wear scarlet; but purple was, as in other countries, limited to great dignitaries.

THE CORNISH FARMER AND THE LABOURING CLASSES.

[From a Correspondent.]



[Cornish Fisherwomen, from the neighbourhood of Mount's Bay.]

THIS Article relates more immediately to the state of things in the western part of Cornwall. It will in its main points, however, be found applicable to that county generally.

Although increased facilities of communication throughout the kingdom, and the operation of the press, have extinguished many provincial peculiarities and practices everywhere, and have produced much uniformity of character and modes of proceeding in general, yet soil, climate, and other matters springing from locality, will ever maintain (especially in parts remote from the metropolis) a certain individuality in the different districts.

The Cornish farms are in general of a moderate size; many of them very small. A hundred acres is considered a pretty large farm. A pretty considerable portion of the land is held by a respectable and valuable class of farmers on leases for three lives, a renewal being generally granted. This system is, however, on the decline, and the farms are taken for terms of seven or fourteen years. Tenures from year to year are very unusual. The soil is for the most part gravelly and favourable to pasture, potatoes, and turnips. Corn also, but more especially barley and oats, yields good crops. Rye-grass and red and white clover succeed admirably, the moisture of the climate co-operating with the nature of the ground in promoting their growth. Lucern, sainfoin, &c., do not succeed so well, nor are they wanted. The indigenous grasses soon overpower them. Potatoes are a staple: they are of excellent quality, and contribute in an eminent

degree to the comfort of the labouring classes, as well as to the due cultivation of the soil. The absence of wood and the frequent appearance of rocks give the country a sterile look, though it is in reality generally fertile when under the plough. Mining operations also contribute to give a barren aspect to the country, although they enrich the inhabitants. Almost every farm has a certain portion of furze-ground attached to it. This ground affords a supply of fuel as well as some pasturage for young cattle and horses. In speaking of the size of a farm, it is usual to say "So much tillable," this furze-croft being reckoned over the bargain. The convertible husbandry, with a three-course crop, prevails. Naked fallowing is almost unknown, as well as old meadow. The mode of harvesting corn is peculiar. Corn of every kind is bound up in sheaves, and, as soon as bound, (*i. e.* the same day,) is made up in the field into what are called *arrish* (eddish) mows. These are of a conical figure, and contain from 200 to 300 sheaves each. Wheat is bound as soon as cut. Barley and oats remain on the stubble for some days, when they are bound up and made into mows. In about ten days or a fortnight, these *arrish* mows are carted into the rick-yard (called *mowhay*) and thrown into long ricks. The uncertainty of the climate, coupled with the grassy condition of the stubbles, has probably led to this practice, as the corn when placed in these mows is perfectly secure against rain, and, at the same time, the grass, &c., in the sheaves is drying up so as to make them fit for the long rick. The method is very neat and economical, and will probably be introduced into

other parts of the kingdom. Large barns for holding corn in the straw are also, by this means, dispensed with, as the thresher can bring in his day's work in sheaves from the long rick from day to day.

A mode of ploughing called *combing* prevails in breaking up ley. The *alternate* furrow is ploughed narrowly and turned on the unbroken sod, termed the *stool*. This answers very well for rotting the turf, the two surfaces being closely applied to each other. In about a fortnight or three weeks the whole is broken down by a drag. Sand and sea-weed are extensively used for manure, especially the former, which is in many cases carted twenty miles for that purpose. One or more railways, with steam-carriages, besides canals, have been established almost exclusively for the conveyance of sand, which is indeed the staple manure of the county.

The horned cattle are chiefly North Devons; but the small breed of the county, being found best adapted to the climate and pasture, are much kept for milch kine. Oxen and steers are brought down to the fairs and markets by dealers from the extensive unenclosed tracts in the central and upper part of Cornwall, where they are bred. The Welch punch horse is much used for heavy draught, and the original small grey Cornish breed is crossed with thorough-bred travelling stallions for lighter work. Farmers near the mines are in the habit of contracting for the performance of such horse-work as may be required thereon. Formerly the ores were conveyed away to the smelting-houses on the backs of mules, large droves of which might, not many years ago, have been met on the roads. These have now been almost superseded by waggons. Sheep-farming prevails extensively. The Leicester, or some cross therefrom, is universal. Hog-feeding is an important branch, owing to the great growth of potatoes; on which, with skim-milk and some barley-meal, the animals are fatted. The long, unimproved, greyhound breed is still very general, though a cross from the Essex and Leicester kinds is gradually coming in, and with eminent advantage. Bacon is not so much used as pickled pork. All the milk is *scalded*, i. e. simmered over a gentle fire for producing clotted cream. Brass pans were formerly used, for which tin is now generally substituted, from its greatly lower price. An old opinion prevails in Cornwall, that milk in brass pans throws up more cream than in those made of any other material. Recent chemical discoveries have shown that zinc vessels afford most cream, and this metal being a component part of brass, the popular notion may be well founded.

The system of dairy-letting is very general in the pasturage district. The farmer provides cows, fuel, cottage, and potato-ground at so much per cow. Pork for the market is chiefly fatted by these dairymen. None but an inferior kind of cheese is made, and that for domestic use. The consumption is very trifling. Owing to the peculiar mildness of the climate towards the western extremity of the county, potatoes are raised very early in the open ground, so early indeed that *two* crops of potatoes are often obtained from the same spot in the same year. The London market begins to be supplied with these as well as with the later kinds. Agricultural societies have become common, and a striking improvement in stock, implements, and cultivation has followed. Persons still living remember when there was hardly a cart on a farm; while now vehicles of every kind and size abound.

The habits of the farmers are in general simple. Men and boy servants live in the farm-house, and eat at the same table with the farmer's family. The usual fare consists of salted pork, salted fish (near the coast), dumplings, broth, milk porridge, and, above all, of potatoes, always boiled with the skins on. Turnips and some of

the commoner garden vegetables are also in use. Twice or three times a week a favourite pie is made of sliced potatoes with bits of pork and some seasoning, having a crust four inches thick running round it, but open in the middle. Apples have of late years come much into use in the cookery of the labourers, and with great advantage. In addition to the valuable kinds with which the county is well supplied, many cargoes are brought from Jersey and France. Neither farmers nor labourers drink anything but water or tea with their meals, except in harvest time. The use of tea is indeed universal, and it is consumed alike by the hardy ploughman and his feeble grandmother. Cheese, home-made, is mostly reserved for harvest time. In this way even farmers of considerable and hereditary wealth continue to live habitually, dressing their families very well, however, and keeping a good best parlour, as well as spare bedroom for the visiter. On market-days, &c., *toddy* (warm spirit and water with sugar) is the favourite indulgence, though in the east of Cornwall malt liquor is more used. Beer-shops abound, whether for good or evil, throughout the county. On cutting the last of the wheat-crop (called the *neck*), a currant cake is given to every person employed.

Large open-hearthed chimneys, without grates, are general, and a settle is placed *in* the chimney as a snug warm situation. The nature of the fuel (originally much confined to furze) has no doubt given rise to this form, as well as to a peculiar mode of baking. A flat circular moveable iron, from fifteen inches to two feet in diameter, is first heated by kindling fuel on it. It is then swept clean, a little flour is sprinkled over, and the bread, pie, or the like placed on it. A hemispherical iron vessel, called a kettle, is then whelmed down over the dish, and is surrounded at the lower part with hot ashes, and a blazing fire kindled above, which gradually subsides into a mass of embers. The whole is in fact a moveable oven. Bread or pastry thus dressed is somewhat moist, owing to the imperfect escape of steam. Thin cakes of potatoes and wheaten flour, or of barley-meal only (the last afterwards buttered) baked in this way, are much used. Owing, however, to the furze-grounds having been brought extensively into cultivation, grates and ranges for burning coal are coming into use, and in the eastern part of the county the kettle system is almost unknown.

Farm-houses and cottages are substantially built of granite in Cyclopean masonry, or of layers of schist, or else of cob, according to the geological character of the district. Thatched roofs, once universal, are now much superseded by slate. The farmers are usually collected in villages, owing to the small size of the farms. These villages are studded with fuel ricks, the thatch of which is secured by straw ropes, and these again are kept down by stones tied at the end—objects very conspicuous in Cornwall, though anything but picturesque.

The labourer partly purchases his fuel, but more generally obtains turf from the farmer, on condition of returning the ashes thence produced, together with what other manure he may collect, to the farm. When the labourer has no constant employer, or is not a husbandman, he bargains in the following way with any farmer. For the manure, and a small payment perhaps, he obtains potato-ground dressed therewith—about half an acre in general. Sometimes, instead of manure being provided, the farmer is paid so much a rod (about 1s.), who then supplies the required quantity, and all the labour to the planting inclusive. A considerable breadth of potato-ground is cultivated by paring and burning, chiefly with the breast-plough, called here "spading." In this case the cultivator pays a rent per rod for the ground, and gets the paring done by contract. Whatever mode may be adopted,

the farmer wholly or partially gets in the crop, and carts home the potatoes when dug: hoeing, digging, &c., are performed by the cultivator. This practice has long prevailed, and is in fact an allotment system, the land being changed yearly. All but the richer classes, and the inhabitants of towns, grow their potatoes in this way. The poor are thus enabled to keep a pig "to pay the rent," and poultry also. Women are much employed in out-door labour. In addition to the getting in of hay and corn, potato-digging and planting affords them considerable employment. Milking also falls to their share; and, not very unfrequently, girls are seen plough-driving.

Labourers constantly employed on the same farm are supplied with corn at a fixed price the year round. They bake their own bread. Barley was in general use, till lately that the very low price of wheat has led to a partial adoption of that grain. This may be accounted for from the fact, that, till within the last sixty or seventy years, it was considered that wheat could only be grown on the best and oldest enclosures on a farm, whereas it is now sown on almost any land. In some districts, however, wheaten bread has ever been in general use by the labourer. Wages, till recently, have been a shilling a day and dinner, with the privileges here enumerated. In many cases, the farmer sets cottage and fuel against the harvest month. Threshing is not a separate branch, but is performed by all the workmen on a farm; and wet mornings are, of course, mostly appropriated for the purpose. A day's threshing (100 sheaves of wheat, 180 of barley, 120 of oats) is completed in the forenoon, or soon after; the remainder of the day the labourer has for himself, to cultivate his potato-ground, get his fuel, &c.

The hand-implements in common use for agriculture are the triangular shovel and a large mattock (called a "pigal"), both long-handled. Owing probably to the absence of short-hilted tools, the Cornish peasantry are more erect in their gait than those of the midland counties. Corpulent persons are seldom seen among them. Cottage gardens are not at all of frequent occurrence: on the contrary, the mud-pool and the dungheap too often occupy their place; and even habitations neat within (which they generally are) are frequently approached through mire and stench*. The same must be said of very many farm-houses, in which, however, hospitality does not the less prevail. Cottage rents are from 2*l.* 10*s.* to 3*l.* 10*s.* Homespun garments have almost disappeared here, as in other parts of the kingdom. The labourers' families are well clothed; and the smart as well as expensive dress of all classes on Sundays and holidays is striking. Trowsers are generally worn. The philibeg is now seen among fishermen only, and that but seldom. The miners work in a coarse woollen dress. This they keep and put on in a room in the mine called the "Change-house."

The system of paying wages, or allowance instead, out of the poor-rate, is almost unknown, though roundsmen are not so. Owing to the present prosperous condition of the mines, and the consequent demand for labour, wages are now high; and that anomalous state of things exists in which, while agricultural produce is low, and rents falling, the price of labour is perhaps higher than ever before known. Employment in the mines, too, is almost always preferred to working on the land. Thus the farmer is doubly harassed. Owing to the increase of population and capital, the waste lands, of which Cornwall has a vast and dreary portion, extending down the centre of the county, and in other parts, are being daily enclosed for improvement. This is chiefly effected through the building of cottages, to

* The many recently-established Cottage-garden Societies, with the general spirit of improvement, will remedy this.

which a portion of the waste, held on three lives, at a very trifling rent, is attached. The cultivation is usually commenced by paring and burning for potatoes. On the estate of the Earl of Falmouth it is said that there are already from 1500 to 2000 such tenants. These improvements are made principally by persons of the labouring class; and the miners in particular are fond of investing their savings in this way. A very neat class of cottages has thus arisen. These men work six to eight hours (called "a corps") out of the twenty-four in the mine. The remainder of their time is free for any other purpose, during which they cultivate their potato-ground, prepare fuel, &c.; and, if beforehand enough with the world to take one of these leaseholds, get together building materials, fence or dig their allotment, &c. It is not unusual for a miner to rent a small portion of land when he has not such a building-lease.

The miners are not free from the improvident habits of their class: eating and drinking bouts, called "choruses," are too frequent, especially on Saturdays. A system of employing them to work parts of the mine "on tribute," *i. e.*, the workman receiving for his labour a certain portion of the ores which may happen to be found in the ground allotted to him, prevails. These "pitches" as they are called, are let by Dutch auction to the lowest bidder, and are taken each by a party of miners, termed "a pair of men." The tribute-work was formerly let from six months to six months, new bargains by auction being made, higher or lower, according to the produce of the period just completed; and during this time the families of the miners were supported by an advance from the employer of "cist (subsist) money." It is now let from month to month—a change greatly to the permanent advantage of the working-miner, since greater certainty is introduced, and the remuneration approaches much nearer to regular wages. Taking the chances of a piece of ground for the long period of six months was too much of a gambling employment for mere labourers, in which extreme suffering and sudden gains alternated, and produced the usual heedlessness and dissipation. Those parts of the mine which do not yield ore are generally done by job-work, called "tut," let by auction also, at so much per fathom, the usual measure in Cornish mines. "Cist-money" is advanced here, also, when required. Parties of men succeed each other in the mines during the twenty-four hours. Boys and girls, and weak as well as strong hands, find employment in "spalling" the ore, and other surface operations. The number of persons employed in a mine varies from twenty individuals to 2000. A medical man attends each mine by contract.

The extended line of coast along the Cornish promontory engages many of its inhabitants in the fishery. Deep fishing for cod, ling, &c., continues through the winter, more or less. In February the mackerel fishery commences, and is carried on in large lug-sail boats, frequently out of sight of land. This fishery is called *driving*. Fishing of one or other description, as hooking, lobster and crab-trapping, &c., occupies the summer. During this part of the year also, during the last twenty years, many boats from the south and west of the county have gone over to Ireland, where they engage in the herring-fishery, and sell their fish fresh. Most of them return in July, for the pilchard-fishery. Some continue a month longer on the Irish coast. The earliest pilchards are taken in nets set from single boats, termed *driving*, similar to the manner in which mackerel are caught. The seine-fishery for pilchards, which is the principal, follows. The seine-net is shot away round a shoal of fish in sight on the surface; men called *hewers*, posted on high cliffs, giving notice of the approach and direction of

the shoals. This fishery continues from eight to twelve weeks. Formerly it lasted till Christmas; and these fish seem to be again returning to their old habits of frequenting the coast in the winter. In the autumn a large fat mackerel is taken, called the winter mackerel: this is usually pickled for winter provision. Pilchards are also pickled for the same purpose, and afford a valuable resource to the labourer, who frequently purchases them from the boat-side for a shilling a hundred, or less. The damaged pilchards (called *mun*), as well as the refuse salt, form a valuable and powerful manure. Boats are often held in shares. Nets, called *craft*, are held separately from the boat. Thus an individual may contribute to the fishing a boat, a share of a boat, a net, or his personal labour only. He may also contribute each of these. The division of fish taken is of course in proportion. The seine-fishing, however, is conducted by companies or individuals (usually the former), who provide the whole of the requisites, except only that men sometimes adventure their labour, or a part of it. The fishermen contrive in leisure hours to cultivate their potatoes in the way already described. Women carry the fish in *cauwals* of willow on their backs to places near the coast. (See the plate.) Their shepherdess hats of black beaver, and often handsome countenances, give them a picturesque appearance. Farther inland the fish is conveyed on light carts by persons who make this their business.

Parish-feasts are still celebrated in Cornwall with much jollity among the classes of society here described: they usually continue three days. Entertainments at funerals are also common. Relations and acquaintance of the deceased go from the church to his or her late residence, where provision is made according to the means of the family. Refreshment also precedes the funeral. It is still usual to call elderly persons "uncle" and "aunt," and the "good night" is commonly given in passing. The use of nicknames is very prevalent. These are not only personal but hereditary, and many families are distinguished by them. Many French words, as well as terms from the extinct Cornish language, are in common use; the latter especially in terms of art among the miners. A sort of recitative or sing-song pronunciation is characteristic, and amuses the stranger much. Agriculturists, miners, and fishermen pronounce very differently from each other in some districts; and within ten miles all these varieties of sound may be sometimes met with. The people generally are much inclined to use the points of the compass, and the eastward, the westward, the south country, &c., are frequently heard. The farmers are very hospitable, and a good deal of kindness and simplicity is still found among them and the labouring classes. The miners, fishermen, and agriculturists amalgamate a good deal together, and are not so much separated as classes of different professions often are. Many individuals are employed in more than one of the three pursuits. The inhabitants are healthy and long-lived, except, perhaps, the miners; they are acute, and courteous to strangers, and mild in their deportment. After the old stories of Cornish wreckers, and of other violences, so generally propagated, this may sound strange. It is not, however, the less true. Many of the old wrecking and similar narratives were no doubt too well founded. The period of these has passed away; and, as might be expected, the general improvement in most points during the last thirty years is striking. The old boisterous amusements of the people, as well as many peculiarities, have almost disappeared; and even wrestling (the Cornish "hug") is greatly on the decline. A great spirit of independence prevails withal. This is fostered by the extensive division of property, the commercial pursuits of the county, and the frugal

habits of the people. In most of the towns mechanics' institutes are established.

To the habits and practices described in this paper Cornwall probably owes in a great degree her comparative exemption from that extensive and long-continued distress in which so large a portion of the kingdom was involved after the general peace, as well as from the overwhelming burden of poor-rates which has crippled the energies of many other counties. It is but fair to add, that Wesleyan Methodism, which may be called the Cornish religion, has had a share in producing this favourable state of things.

NATURAL ANALOGIES.

UNDER the general head of Natural Analogies, it is intended to treat of some of the different methods by which the same object is accomplished throughout the several departments of the physical world.

In organized nature, the weakest moment of each plant and animal is that at which it is also the most minute, and therefore the most capable of being protected. Thus, the delicate parts which compose the flower are easily shrouded by a mass of leaves, nor are they exposed to the elements till they are able to endure their contact.

The ripening principle does not cover the anthers of plants till these anthers, and the stigma destined to receive their influence, have acquired sufficient strength and solidity to fulfil their respective laws; and the petals only open when the parts beneath them no longer need their protection. The work of vegetation proceeds, the seed lies secure within the seed-vessel, and is not dismissed from the plant till it is covered by a husk or by some other tenacious integument. Once placed in a situation fit for growth, the seed yields to the operation of its hidden forces, and the shoot springs forth.

The same care being still needed, the destined stem of the plant does not emerge from the earth till sufficiently strengthened and supported by a root to sustain the casualties of the new world to which it is introduced. If the fragile plant were now to put forth leaves of the size and in the profusion which belong to a more advanced stage what would happen? The slightest breath would bend it to the earth, and the feeble grasp of its delicate root would soon become completely relaxed. But no such inconsistency takes place: the leaves of the infant plant are few and minute, the weight to be sustained does not surpass the power of the root below, and the same exquisite balance is preserved throughout its growth. Its dimensions increase not, except in proportion to strength and solidity. It need scarcely be remarked that these last observations refer principally to trees.

If we look to the animal kingdom, here also the moment of greatest weakness is that also of the utmost minuteness. Most probably all animals have life and motion before their texture is sufficiently confirmed to receive without injury even the gentlest influence of the elements; but the immutable law of nature befriends them, and a shell or a membrane in the oviparous, and the body of the perfect individual in the viviparous species, suffices at this time for the protection of their minute offspring. The period of gestation or incubation at length expires, or the secret force of nature in earth or water has acted for a sufficient time upon the eggs abandoned to its influence: in all these cases the young animal is now liberated, but it is still to experience the effect of the salutary decree which has coupled the utmost minuteness with the greatest imbecility; the wings of the parent bird suffice to cherish the brood, and in general the warmth emanating from the body of the perfect individual sufficiently pervades

the nest, or excavation, in which its young is cradled. Nor is this all. The lightness of the infant animal enables the parent to convey it at pleasure from place to place, and thus to carry it beyond the pursuit of enemies, or, where this is not the case, the minuteness of the young enables the older individual to guard it with the greater ease from the attack of a foe. Besides this, it is certain that many animals in the first stage of their life must frequently owe their preservation to the smallness of their bodies, which escapes the search of natural enemies, against which they would, if discovered, be unable to contend. Were the spawn of fish for instance, or the larvæ of insects, exposed in a bricked tank or on a bare rock to the attack of some of their finny or feathered destroyers, what individual of those doomed victims would escape? The organs not being developed or sufficiently strengthened for complete use, nature has provided innumerable hiding-places in which the weakness of her children may elude the force they cannot resist. The shadow of a rock or of a stone, of a tree, or even of a blade of grass, affords perhaps every moment refuge to some defenceless animal, whilst the minuteness of the individual enables it, as its weakness inclines it, to find concealment.

It may be here said that the time of extreme age has been taken no account of, a time which nevertheless may appear to some to be one of as great weakness as the period of extreme youth; whence it may be objected that there is a moment when our principle does not hold, because in the aged individual the utmost minuteness is not joined to the greatest weakness. The answer to this objection is, that together with the vigour of life arrives and passes the time allotted by nature for the fulfilment of the great laws which govern the destiny of each individual, such, for instance, as the continuation of the species, and the like. It was therefore highly important that every possible provision should be made for conducting each individual to this mature period of its existence, because unless it reached this time it could not act its destined part. Hitherto therefore Nature is, as it were, a debtor to each of her children; she is pledged to put each in a condition for discharging the service she demands; but this grand object once attained, another law no less imperative begins to be felt. According to the constitution of things dissolution is no less necessary than production and preservation; for the earth would soon cease to afford habitation and sustenance to the animal and vegetable tribes, if life and death were not the prelude to each other. Decay then is necessary, and organized forms having fulfilled one part of their destination, are abandoned to that destructive principle in order to accomplish the other.

Another decree which provides for universal conservation is the principle, that the production of everything shall be in exact proportion to its consumption. If we consider the unorganized world, we shall be struck at every turn with some development of this principle. What, for instance, is more constantly drained of its resources than vegetable earth? Innumerable roots, at a greater or less depth, are hourly drinking its moisture and imbibing its thousand other unknown powers, and, for anything we know, unnumbered animals may be supported by the same aliment. The sun exhausts it from above, for it must contribute to the clouds; and in many regions subterranean fire doubtless drains a part of its moisture from beneath. If a being unacquainted with our planet were to be told of these innumerable ways in which the ingredient vegetable earth was every moment consumed, would he not fear that it would soon be exhausted? But the grand law now under consideration here steps in, and we are astonished at the exquisite provision which appoints the vegetable kingdom to contribute unceasingly by its

decay to the renovation of the sources from which its life is drawn.

The next material which here naturally presents itself is water, which enters into the composition of, and is constantly demanded by, every organized form. This great element of support is not less required in the hot than in the high regions of the earth, although they would appear to one who simply considers the best properties of water the least capable of retaining it. For from the latter of these regions this fluid has a natural tendency to descend, whilst from the former its volatility causes it to be rapidly exhaled; and moreover, where these regions are sandy (a thing which frequently happens), the weight of water, no less than its tendency to exhalation, renders it, in these districts, as fleeting as it is precious. Such are the reflections which would infallibly suggest themselves to him who should reason on this subject, provided he was simply acquainted with the prominent characteristics of water, and ignorant of those laws which produce results the reverse of what he might naturally expect.

Let us then consider some of these decrees, that we may see how, with regard to the important fluid in question, our principle holds, namely, that the production of everything is in exact proportion to its consumption. Now, with regard to animals, (by whom so large a portion of water is constantly demanded,) there are many ways in which they return the water they absorb. Much internal moisture is constantly converted into steam, or secreted to the surface of the skin; in both cases it is absorbed by the air. The production of water is chiefly occasioned by the tendency which it has to rise into the atmosphere in the form of vapour. Many of the rivers which intersect our globe would flow in vain were it not for evaporation. A few spots might enjoy fertility were it not for the clouds which waft the important element to every region. The least moisture exposed to the atmosphere is every moment acted upon by the law that supplies these universal purveyors of water; nor do trees contribute less unceasingly to their demands than lakes, rivers, or seas; for their roots, deeply penetrating the earth in search of aliment, arrive at water that would never have felt the external air. This they of course absorb, and after it has performed its destined part, when it has augmented sap and been converted, according to the nature of the vegetable within which it circulates, into colour, fragrance, and solidity, much of it is doubtless secreted to the surface, and thence taken up into the ever-acting atmosphere.

Let us now suppose the clouds charged with rain: the moist is become water, and a gaseous substance is converted into one of great weight. What is the result? The most exquisite that could have been planned; for the heavy fluid descending upon the earth necessarily first wets the surface, and thence sinking to its destined level carries with it its vivifying influence through the various ranges of vegetable life.

If we next consider the higher regions of the globe, we shall observe equally wise provisions. Here are generally the sources of rivers, those inexhaustible magazines of water. Hills and mountains, moreover, have a tendency to attract the clouds, and thus to engross a large portion of the rain. Water is thus collected there whither streams could not ascend, and it is thence diffused from the higher to the lower regions, so that all necessarily participate in its influence.

[To be continued.]

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ALPINE PEASANTS RETURNING FROM THE MOUNTAINS.

[From a Correspondent.]



[Alpine Peasants returning home.]

ON a fine evening early in the last autumn, on passing through the valley of the Salza, which is surrounded by some of the richest Alpine pasturages, I met numerous herds of cattle descending from their summer pastures in the mountains. The herdsmen were laden with the pails, churns, and other utensils used in the making of the cheese in the mountains; and here and there were seen happy groups—wives and children coming out to greet them after their long sojourn in the Alps. The accompanying sketch represents a party who had just reached their native village after an absence of three months, each heavily laden with the produce of the summer pasturage. As the village was in sight, and their toilsome journey nearly ended, I felt something of regret at stopping them, even for a few minutes whilst the sketch was made; but a zwanziger (about 6*d.*, and there equal to an English half-crown) appeared completely to compensate for the short delay.

In all the Alpine ranges of Switzerland, the Tyrol, and Italy, on the approach of summer the peasants

lead their herds up to the pasturages on the mountains. These, from their height, are uninhabitable during the winter and early spring months. They are resorted to at different seasons, according to their heights; and some of them, placed at an elevation of 6000 or 7000 feet above the level of the sea, afford food for the cattle but for a short period, the covering of snow not disappearing till June, and winter closing in at the end of August, or beginning of September. In these Alpine heights are built log-huts, called *châlets*, in which the herdsmen and their cattle are sheltered. In some parts of the higher Alps the peasants remain during the whole season, without returning more than twice or thrice to fetch up a scanty supply of meal, the remainder of their food being the milk of the cattle and the cheese made in the *châlets*. As the higher grounds are only accessible by steep and winding foot-paths, the few articles of food, and the churn and pails necessary for the preparation of the cheese, are carried up on the backs of the herdsmen, who thus pass their time with their cattle in entire solitude. Sometimes a

single man has the charge of ten or fifteen cows, and remains for ten or twelve weeks hung up amidst pine-forests, rocks, and glaciers of ice, without seeing a human being. Their appearance is in general wretched and dull; and when by chance a wandering traveller visits their haunts, they will follow him for miles, in order to exchange with him a few words of conversation. On the approach of winter they return with the cattle and the stock of cheese that has been made in the mountains.

The following extract from M. Simond's 'Travels in Switzerland' describes one of these mountain châteaux; but those in the higher mountains are far more dreary, and possess even less of comfort and convenience.

"The higher ridge of the Scheideck, when we passed it, was crowded with cattle, assembled there for miles to avoid the flies, which in more sheltered situations torment them during the heat of the day. The natural process by which soil is made was everywhere observable on the Eselsrücken (Ass's Back), where the uncovered edge of the slate is so far decomposed by exposure to weather, that large fragments, apparently sound, crumbled into black dust under our feet. This dust, fertilized by the cattle, is in some places covered with grass; in others it is washed away to lower grounds, leaving the surface of the slate again exposed to the weather, to be farther decomposed.

"Some way beyond this ridge we came to a châtlet, which, being occupied by the shepherds, afforded more conveniences than our halt of yesterday. Here a fire was already blazing in a sort of pit or trench dug around by way of a seat, and a huge kettle hung over for the purpose of cheese-making. We had plenty of cream furnished us, in which the spoon literally stood on end, a kettle to make coffee, and wooden ladles by way of cups. All the utensils were made of maple, of linden, and of a sort of odorous pine (*pinus cembra*), by the shepherds themselves, who bestow much time on this manufacture. We noticed the portable seat with a single leg, oddly strapped to the back of those who milk the cows; the milk-pails, the milk-hod fastened to their shoulders, the measures, the ladles made in the shape of shells, the milk-strainer (a tripod funnel full of pine leaves), the vase in which rennet (used to coagulate milk) is preserved, the press, the form, and many other implements of their trade, all elegantly shaped, and very clean.

"The châtlet itself was an American log-house of the rudest construction; the roof, composed of clumsy shingles, gave vent to the smoke in the absence of a chimney; this roof, projecting eight or ten feet, formed a sort of piazza, called the melkgang, a German word, which, like many others in that language, needs no English translation.

"The bed-room of the shepherds in these summer châteaux is a wooden gallery, hung up over the melkgang, close to the projecting roof; they go up to it by a ladder, and all herd together on a little straw, never changed. The cows come home to be milked, attracted from the most distant pastures by a handful of salt, which the shepherd draws out of a leathern pouch hanging across his shoulder. The ground round the châtlet is so broken, poached, and made filthy by treading of cattle, that without stepping-stones it would be difficult to reach the door; to finish the picture, a herd of swine ranges about, waiting for the allotted portion of butter-milk and curds. All this is, no doubt, very different from Rousseau's charming description of a châtlet; but the châteaux about Heloise's residence were family dwellings, inhabited the whole year round, and such as are found on lower mountains only; they are kept perfectly clean and comfortable, and are in all respects different from those on the High Alps, con-

structed for mere temporary shelters during a few months: no women live in the latter.

"When the weather is tempestuous, the shepherds, or rather the herdsmen, are up all night in the mountains with their cattle, calling to them, as without this precaution they might take fright, run into dangers, and be lost. A few places of shelter, built of logs on the principal pastures, would, it seems, answer the purpose better with less trouble. The cattle look very beautiful and active, full of spirit and wild sport; they show much more curiosity and intelligence than the rest of their kind, and often follow travellers from rocks to rocks a long while, merely to observe them. Bulls, notwithstanding the fierceness of their looks, never attack anybody. Mr. Ramond, in his notes on Coxe's Travels, tells an interesting story concerning these animals, which, if it should happen not to be quite true, at least deserves to be so. Speaking of their antipathy for bears—"It is impossible," he says, "to restrain a bull when he scents a bear in the neighbourhood; he comes up to him, and a running fight begins, which often lasts for several days, and till one of the two is killed. In a plain the bear has the advantage; among rocks and trees the bull. (I should have thought just the reverse.) Once, in the Canton of Uri, a bull went in pursuit of a bear, and did not return; after searching for him three successive days, he was found motionless, squeezing against a rock his enemy, which had been long dead, was quite stiff and cold, and almost crushed to pieces by the pressure; such had been the efforts of the bull, that his feet were deep sunk into the ground."

MIGRATION OF SWALLOWS.

In the 51st vol. of the 'Philosophical Transactions' (for 1760), there is a letter addressed by Mr. Collinson in answer to the German naturalist Klein, who had advocated the opinion that swallows and other birds do not migrate, but remain torpid during the winter. Subsequent naturalists have added little to the arguments and facts which this letter brings against the opinion; though they have since been supported by collateral and negative testimony.

The opinion that swallows at the time of their disappearance retire under the water and remain there, says this writer, is contrary to nature and reason; for as they cannot live in that state without some degree of breathing, this requires the circulation of the blood however weak and languid. Now as to respiration, is it possible that it should be carried on for so many months under the water without the risk of suffocation? If it were really the case, there must be some particular contrivance in the structure of the organs of the heart to enable it to undergo so remarkable a change of element; but Klein had not even attempted to show that such a peculiar organization existed. This remark of Collinson probably led John Hunter to interest himself on the subject. He states "that he had dissected several swallows, but found nothing in them different from other birds as to the organs of respiration;" and he consequently concludes "that they could not remain for any time under water without being drowned." Collinson then asks why the opinion is never tested by taking a swallow at a time when the species usually disappear, and observing the result of confining it under water in a tub for a week or two. Still proceeding with his negative evidence, he states that towards the end of September the swallows assemble among the reeds in the islands of the Thames, and have done so for ages past; yet he had never heard or read of any fishermen or other person who had ever found a swallow under water in a torpid state; and if so strange a thing had ever happened, it would

doubtless have been communicated to the public. Besides, the reeds and willows on those islands are annually cut down for several uses, and yet no swallow has been discovered in his aquatic abode; and considering the multitudes which might be seen on these reeds and willows in the autumn, it is credible that some should not have been found in so frequented a river, during the course of so many years, if the swallows really took up their residence under the water. He adds that in great towns remote from water, where rivers and reeds are not near, he had frequently observed, a little before the swallows disappeared, that they assembled every morning early on the roofs of large houses exposed to the morning sun: this was doubtless in order to collect their numbers before taking their flight.

In the way of positive testimony for the migration of swallows, he says he had often heard Sir Charles Wager, First Lord of the Admiralty, relate, that in one of his voyages home, in the spring of the year, as he came into soundings in the Channel, a great flock of swallows came and settled on all his rigging; every rope was covered; they hung on one another like a swarm of bees; the deck was filled with them; they seemed almost spent and famished, and were only feathers and bones; but being recruited with a night's rest, they took their flight in the morning. Collinson adds that a similar circumstance had been related to him by the captain of a merchant vessel, on whose statements he could entirely depend. Pennant remarks, on this incident, that the extreme fatigue of the swallows proves that the journey must have been very great, considering the amazing swiftness of these birds. In all probability they had crossed the Atlantic, and were returning from the shores of Senegal or other parts of Africa; so that this account, from that most able and honest seaman, confirms the following later information of M. Adanson, as adduced by Collinson himself, who considers the testimony the more valuable, as coming from a professed naturalist, who went to Africa for the express purpose of collecting information. Adanson says,—“On the sixth of the same month (October), at half-past six in the evening, being about fifty leagues from the coast (between the island of Goree and Senegal) four swallows came to take up their night's lodging on the ship, and alighted on the shrouds. This lucky accident confirmed me in the opinion I had formed, that these birds pass the seas to get into the countries of the torrid zone at the approach of winter in Europe; and accordingly I have since remarked that they do not appear in Senegal but in that season. A circumstance no less worthy of note is that the swallows do not build nests as in Europe, but lie every night by pairs, or single, in the sand upon the sea-shore, where they rather choose to fix their habitation than up in the country.” To this quotation from Adanson, we may add another, relating to an observation which he made on the subject at Senegal, in the month of February:—“The hut where I lodged was large and commodious, but as dark as a subterraneous cavern, even at noon day, because it had no other opening than a door pierced at each end. Here I may observe that a great number of our European swallows resort hither every evening, and pass the night upon the rafters; for, as I have elsewhere mentioned, they do not build their nests in this country, but only come to spend the winter.”

Collinson also informs us that he was anxious to test the position of Klein that the sand-martins retire at the approach of winter into the holes in which they had resided during the summer, and there remain in a dormant state. But the sandy precipices in which these birds build are generally so inaccessible, that some years had passed before he could find a situation in

which the experiment might be made without difficulty or danger. At last such a situation was found at Byfleet, in Surrey, and the clergyman of the parish, being his friend, and well qualified to make the experiment, undertook it at his request. This clergyman in his communication states, that he took a square of about twelve feet, over that part of the cliff where the holes were the thickest, which, in going down from the surface, would, as he judged, take in about forty holes. He set to work, and came to the holes, but found no martins—nothing but old nests at the inner extremity of the holes, which was from a foot and a half to two feet from the entrance. Forty holes were carefully searched without finding any birds; but thirty of them had nests, which were composed of straws and grasses rudely put together, and were sunk almost an inch and a half below the level of the passage.

That the migrations of swallows and other birds should ever have been doubted, can only be accounted for by the fact that these migrations generally take place by night, and in the higher regions of the atmosphere. An observant naturalist, however, may sometimes hear them when he cannot see them. Their departures may also occasionally be witnessed, and their preparations for departure still more frequently. In a note to his ‘Sacred History of the World,’ Mr. Sharon Turner, some other of whose quotations in illustration of the general subject we have adopted, quotes the following from the ‘Berks Chronicle,’ descriptive of a migratory movement which took place in October, 1829:—

“We have had sharp frosts during the week, and large flights of plovers and teams of wild ducks and geese have passed hence in a northern direction. On Wednesday morning last the roofs of all the higher ranges of houses in Prospect-street in this town (Reading) were covered with thousands of the swallow tribe, which had there assembled preparatory to their annual migration to a warmer climate. From their chirping and fluttering about, they seemed to be in grand debate; and about nine o'clock the larger division departed in a S. W. direction, and was afterwards followed by the others. The morning was remarkably fine and cheering, and the little emigrants were pluming their wings soon after sunrise, preparing, as it were, for their long voyage and still dubious destination.”

Variety of Occupations.—It is the great wisdom and providence of the Almighty, so to order the dispositions and inclinations of men, that they affect divers and different works and pleasures; some are for manuary trades, others for intellectual employments; one is for the land, another for the sea; one for husbandry, another for merchandise; one is for architecture, another for vestimentary services; one is for fishing, another for pasturage; and in the learned trades, one is for the mistress of the sciences, divinity; another for the law, whether civil or municipal; a third is for the search of the secrets of nature, and the skill and practice of physic; and each one of these divides itself into many differing varieties. Neither is it otherwise in matter of pleasures: one places his delight in following his hawk and hound, another in the harmony of music; one makes his garden his paradise, and enjoys the flourishing of his fair tulips, another finds contentment in a choice library; one loves his bowl or his bow, another pleases himself in the patient pastime of his angle. For surely, if all men affected one and the same trade of life, or pleasure of recreation, it were not possible that they could live one by another; neither could there be any use of commerce, whereby man's life is maintained; neither could it be avoided but that the envy of the inevitable rivalry would cut each other's throats. It is good reason we should make a right use of this gracious and provident dispensation of the Almighty; and therefore that we should improve our several dispositions and faculties to the advancing of the common stock; and withal, that we should neither encroach upon each other's profession, nor be apt to censure each other's recreation.—*Bishop Hall.*

THE WELL OF ST. KEYNE.



[Well of St. Keyne, Cornwall.]

IN the small parish of St. Keyne, in Cornwall, is the well of that name, classed by Carew among the natural curiosities of the county, and more distinguished, perhaps, from the peculiar properties attributed by an absurd tradition to its waters, than many other springs, though renowned for their healing virtues. "One who caused this spring to be pictured," says Carew, "added this rhyme for an exposition:"

In name, in shape, in quality
This well is very quaint.
The name to lot of Keyne befell—
No over holy saint.

The shape, four trees of various kinds,
Withy, oak, elm, and ash,
Make with their roots an arched roof
Whose floor this spring doth wash.

The quality, that man or wife,
Whose choice or chance attains
First of this sacred stream to drink,
Thereby the mastery gains.

The trees mentioned in this verse have been long since dead, but others of similar kinds were planted many years ago by Mr. Rashleigh, and still continue to flourish over the crystal spring. Its situation is picturesque, but confined; and its waters have lately been "sealed" or secured by modern doors, which add nothing to the former character of the spot.

St. Keyne is said to have been a holy virgin, daughter of Braganus, prince of Brecknockshire, and to have gone on a pilgrimage to St. Michael's Mount in Cornwall, in which county she made a long stay,

and was much revered by its inhabitants for her sanctity and supposed miracles. The name of Keynsham, a parish near Bath, appears to have been derived from the same origin. Capgrave, a writer of the 14th century, relates that in that neighbourhood she converted the vipers into Cornua Ammonis. An amusing tale relating to this well, founded on the old popular tradition, has been written by Southey:—

THE WELL OF ST. KEYNE.

A well there is in the west countrie
And a clearer one never was seen;
There is not a wife in the west countrie,
But has heard of the well of St. Keyne.

An oak and an elm tree stand beside,
And behind does an ash tree grow,
And a willow from the bank above
Droops to the water below.

A traveller came to the well of St. Keyne,
And pleasant it was to his eye,
For from cock-crow he had been travelling,
And there was not a cloud in the sky.

He drank of the waters so cool and clear,
For thirsty and hot was he,
And he sat him down on the grassy bank
Under the willow tree.

There came a man from the neighbouring town,
At the well to fill his pail,
By the well-side he rested it down,
And bade the stranger hail.

"Now art thou a bachelor? stranger," quoth he,
"Or if thou hast a wife,
The happiest draught thou hast drank this day,
That ever thou didst in thy life."

“ Or has your good woman, if one you have,
In Cornwall ever been?
For and if she has, I'll venture my life
She has drank of the well of St. Keyne.”

“ I left a good woman, who never was here,”
The stranger he made reply,
“ But that my draught should be better for that,
I pray thee answer me why?”

“ St. Keyne,” quoth the countryman, “ many a time
Drank of this crystal well;
And before the angel summoned her,
She laid on its waters a spell.

“ If the husband of this gifted well
Shall drink before his wife,
A happy man thenceforth is he,
For he shall be master for life.

“ But if the wife should drink of it first,
Alas for the husband then!”

The traveller stooped to the well of St. Keyne,
And drank of its waters again.

“ You drank of the water, I warrant, betimes,”
He to the countryman said,
But the countryman smiled, as the stranger spoke,
And sheepishly shook his head.

“ I hastened as soon as the wedding was o'er,
And left my good wife in the porch;
But faith! she had been wiser than I,
For she took a bottle to church!”

THE KNIGHTS OF MALTA.—No. I.

THE history of the ancient and once honourable Knights Hospitallers of St. John is an interesting but very large subject, being, in fact, for several centuries interwoven with, and a leading part of, the general history of Christendom. A short sketch, however, like that we recently gave of their rivals, the Knights Templars, may amuse and instruct our readers, whose attention we will endeavour to direct to fuller sources of information. The long annals of the Hospitallers begin in the darkness of the tenth century, when the Saracens were masters of Jerusalem and the Holy Land: they thence go through all the adventurous and romantic periods of the Crusades; are then prolonged through the wars with the Turks, against whom they were once considered by Christians as a bulwark, and, after nearly eight centuries, they finally end in weakness, treachery, and disgrace, in our own days, during the wars consequent on the French Revolution. Few dynasties of emperors or kings have lasted so long as the order and dominion of these monk-warriors, who were originally paupers and attendants on sick and needy pilgrims in Palestine.

As early as 1050 the Catholic Christians of the commercial states of Italy had obtained from the Mohammedans permission to erect a church in Jerusalem wherein they might celebrate mass according to the Latin ritual. To this church were soon added two hospitals, the one, named after St. John, for the accommodation of male pilgrims, and the other, St. Mary Magdalen, for the reception of females. Some Benedictine monks performed the services of the church, and pious laymen who had resolved to end their days or to make a long sojourn in the Holy Land, attended to the houses of charity. At first the latter were chiefly Italians from Amalfi, Venice, Genoa, and Pisa, which enterprising cities kept up a constant communication with the East; but in process of time other nations sent their traders and their devotees thither, and a mixed European colony was formed on the shores of Asia, the members of which, differing widely in character, views, and interests, were held together by a common religion, and by the necessity of mutual assistance and support against a common enemy. The alms of the people of Southern Italy, and the liberal donations of their devout conquerors, the Normans, added to the money left in the country by merchants and the richer pilgrims, supported these establishments at Jerusalem, and the commercial citizens of Amalfi were the faithful trustees and managers of their funds. Originally the

hospital of St. John was what its name imported, and nothing more: the sick were cured,—an economical, unostentatious hospitality was practised,—and so just and comprehensive a notion of charity was entertained, that not even the infidel Arab or Turk was ever sent away empty-handed from its gates when want made him a supplicant.

But this state of things was gradually changed when new conquerors of the country, the Seljukian and Ortokite Turks, despising the tolerance of their Muselman predecessors, began to persecute the Christians; and the Christians, instead of being satisfied with their condition of guests, traders, and pilgrims, which indeed they could no longer enjoy in peace, resolved to make themselves masters of the tomb of Christ and of all Palestine by force of arms. By the year 1100 the warriors of the first crusade had driven the infidels from the Holy Land; and Godfrey of Bouillon—

“ ——— il Capitano

Che il gran sepolcro liberò di Cristo,”

was unanimously elected first Christian king of Jerusalem. Then the establishment increased in importance, and, eighteen years later, the voluntary association of the *Serjiens* or *Servientes** of the hospital of St. John was erected by the Church of Rome, under whose protection the hospital was placed in 1113, into a regular monastic society, with obligatory laws and regulations, and became the first of the famed military orders of monks. This was in 1118, when Gerard was their chief or abbot; but it was not until some twenty years later, under the abbot Raymond du Puy, that these monks became soldiers, and wielded with the same hand the Cross and the lance. An Italian historian dwells on the anomaly. “These things, though altogether new, seeing that they were religious institutions got up for the shedding of blood, were received with so much ardour that in a very short time the military orders were seen in great numbers, and in possession of immense wealth. The first of them all was that of St. John of Jerusalem, or the Hospitallers, originally established to receive the pilgrims that went to that city; the second was the order of the Knights Templars, whose occupation was to provide for the safety of the pilgrims by fighting against the infidels who molested them; and the third was the Teutonic order of knights, who professed to discharge both of the duties aforesaid. In imitation of these arose the Knights of St. James and of Calatrava, in Spain, and other military monkish orders in other countries †.”

At their first regular incorporation the Hospitallers were divided into three classes—nobility, clergy, and servientes, or serving-brothers. To be admitted into the first class, or to claim what was called the grand cross, it was necessary to prove the gentility of one's father and mother. At first, legitimacy of birth was not held to be a matter of great moment; and though the knights, by their vows, were bound to be as pure as vestals, it mattered not what might have been the conduct of their mothers, provided only they were of gentle birth. A stricter regulation, however, was made in the time of Hugh de Revel, who was grand master from 1262 to 1268. The law then passed enacted, that every person on offering himself to profession must produce proofs of being born in lawful wedlock, and also proofs of his father's legitimacy,—but the sons of counts, and persons of high rank and quality, were exempted from the operation of this law. At the beginning of the seventeenth century the exception made to illegitimacy was carried still further, and no bastards were admitted into the order, unless they were sons of kings, or of other sovereign princes. The difficulty of obtaining the grand crosses varied according to the national character of countries, and the difference of

* From the Latin *serviens*, verb *servire*, to serve, &c.

† Giannone,

appreciation in which noblesse and heraldry were held by the people. In Tudesque, and fastidious Germany, the candidate was obliged to show sixteen quarters of gentility, and prove that all the alliances of his house had been perfectly pure. A great-great aunt that had gone astray, or made a *mesalliance*, was fatal to the aspirant! In the German branch, or language, as it was technically called, the natural sons even of sovereign princes were not admitted to be Knights Grand Crosses. The legitimate children of judges and chief magistrates, though of families reputed noble, were in like manner excluded, *because* their gentility was deemed to be a civil gentility, and so unqualified to enter into a body where they admitted only a superior gentility,—military by name as well as arms.

The Spaniards and Portuguese were satisfied with four quarters, but the French exacted eight. In Italy, the blazon and arms of the father and mother, and of the paternal and maternal grandmothers, were required. A modern writer observes, that in Genoa, Lucca, and Florence, the commercial spirit of the people softened aristocratical haughtiness, and the *sons* of merchants, bankers, and tradesmen, might be candidates for the honour of Knights Grand Crosses; but it should be especially remembered that in those trading republics, as at Venice, Pisa, and in many other parts of Italy, commerce was not considered a degrading but an honourable profession, which was ardently followed by the Dandolos, the Foscaris, the Dorias, the Serras, the Medicis, and others, the most noble and ancient of the land; and thus the *sons* of merchants and bankers could present the proudest arms and blazons. It was the esteem in which commerce (despised by a fierce and ignorant nobility elsewhere) was held in Italy that placed her for centuries in the foremost rank of nations, and filled the land with arts and beauty; and she began to decline from the very moment the prejudices of her Spanish invaders were adopted concerning trade. The Abbé de Vertot, however, who had not overcome in the eighteenth century the prejudices of the thirteenth, complains of the Italian practice, which he calls “making knights of a very base alloy*.”

The servientes of the Order of the Hospitallers were not obliged to prove any nobility; but in the sixteenth century it was enacted that they, the serjeants-at-arms, and brother chaplains, should be born of respectable parents, who had never been engaged in any servile art or business.

We do not find the precise date, but in course of time the knights themselves were divided into seven classes, called “languages,” which were esteemed the three great tongues of Europe. These were the Italian, the German, the Aragonese;—the three great dialects spoken in France, namely, the Provençal, the Auvergne, and the common French; and, lastly, English. The order of St. John came into England during the reign of Henry I. Their first priory was in Clerkenwell, where the name of St. John’s Square, and a gloomy old gate-house (now, we believe, a tavern), preserve the recollection of the old knights. The gate, or arch, however, did not, in all probability, belong to the original edifice, which was set on fire and destroyed, in 1381, by Wat Tyler’s mob, and was not perfectly rebuilt until 1504, in the reign of Henry VII. The Reformation, under Henry VIII., broke up the English branch of the Order, for which the two languages of Castile and Portugal were substituted. All those who embraced the doctrine of the Reformation did not break with the Order, but the Grand Bailiff of Brandenburg and the seven German Protestant commanders under him, could not, on account of the difference of faith, co-operate with the Catholic knights.

The original constitution of the order was oligarchical; but in council the abbot or grand master had

* ‘History of the Knights Hospitallers,’ &c.

two votes. Together with the profession of chastity and poverty, every member vowed obedience and absolute resignation to the will of the council. No member could claim or hold estates except in common with the order and his brother knights. Like all cavaliers they were bound to defend the people and the faith, to risk their lives freely in battle against the infidels: death on the field was the acme of honour and a passport to paradise—flight from it an indelible disgrace that deprived the cravens of the habit and cross of the order. The latter deprivation was also incurred by every knight that fought a duel on his own account, or sent or accepted a challenge to a private combat. He who struck his companion, however lightly, was condemned to fast during forty days; and the parties to a quarrel were to dine on the ground* without salver or table-cloth for seven days, and eat nothing but bread and water on Wednesdays and Fridays. Among some curious provisions for their internal discipline we find the following:—Knights of St. John were not permitted to sleep naked nor to talk in bed—they were to wear woollen or linen night-clothes, and to go to sleep in silence, as soon as they had said their prayers, like good Christians. They were on no account to talk at the dinner-table.

The Patriarch of Jerusalem, who first heard their vows, having authority therefore from the Pope, invested the knights with a long plain black robe, with a very large white linen cross of eight points, sewed on the breast. This peculiarly-formed cross has since obtained the name of *Croce di Malta*, or Malta Cross. In Boisgelin’s book † there is an engraved portrait, said to be after an original painting of Raymond du Puy, the second Grand Master of the Order, who is represented with a crucifix in his left hand, and a rosary in his right: a very long straight sword is at his side; his plain loose robe, in fashion not unlike a smock-frock, descends to his ancles, and is open round the neck, falling in a narrow collar on the upper part of the shoulders. At the latter end of the thirteenth century an alteration was made in the dress of the knights. The Grand Master and Chapter enacted, that while the brethren were in the field, or on any military duty, they should wear over their clothes a red cassock, with a white cross strait. The long black mantle or habit, however, was never dispensed with in the house. No religious order appears to have paid so much attention to the toilette; their statutes are full of regulations on this head, and while many of the fanatic associations of the middle ages thought to please God by sordidness of appearance, by filth, and by showing “a most religious scorn for shirts,” the Knights Hospitallers insisted on the virtues of cleanliness and decency, nay elegance of attire. “It becomes a religious man,” says one of their old laws, “to be clean in body as well as in mind, and therefore we enjoin our brothers to dress themselves decently and handsomely, forbidding them expressly, for the future, to wear any dress that is not fit for their condition, particularly short clothes, unless, indeed, they be on a journey, or on shipboard, or on guard.”

It was the putting on of the long black habit on the candidate that constituted his initiation and reception into the Order, and it was torn from his back when a knight was disgraced and expelled from the society.

The ceremonies of profession and reception were not deficient in solemnity. The vow ran in these words:

* We have frequently seen this puerile punishment practised on novices in the Franciscan convents of Southern Italy. When the youths had misbehaved, they were not allowed to sit at table, but after the monks had finished their dinner, a platter was put upon the floor of the refectory for the novice, and at the same time the cats of the convent were admitted to pick up the scraps that had fallen from the monks’ table. This was called *pranzare co’ gatti*—to dine with the cats.

† Ancient and Modern Malta, with the History of the Knights of St. John of Jerusalem, &c. &c.

"I do promise and vow to Almighty God, to the Holy eternal Virgin Mary, mother of God, and to St. John the Baptist, to render henceforward, by the grace of God, perfect obedience to the superior placed over me by the choice of the Order, be he who he may, to live without personal property, and to preserve my chastity."

The brother knight who received him then said; "We acknowledge you as the servant of the poor and sick, and as having consecrated yourself to the defence of the Catholic church." To which the newly received knight answered, "I acknowledge myself as such." He then kissed the missal, placed it on the altar, which he also kissed, and then, in token of obedience, brought back the missal to the brother who had received him. This brother then took up the mantle, and pointing to the white cross on its breast, said, "Do you believe, my brother, that this is the symbol of that holy cross on which the Saviour died for our redemption?" The new member answered, "Yes, I do verily believe it." "It is likewise," continued the senior, "the sign of our noble Order, which we command you constantly to wear." The newly admitted brother then kissed the sign of the cross, and the other threw the robe over his shoulder in such a manner that the cross rested on his left breast. The senior brother then kissed him, and said; "Take this sign in the name of the Holy Trinity, of the Holy eternal Virgin Mary, and of St. John the Baptist, for the increase of faith, the defence of the Christian cause, and the service of the poor. We place this cross on your breast, my brother, that you may love it with all your heart; and may your right hand ever fight in its defence, and for its preservation! Should it ever happen that, in combating against the enemies of the faith, you should retreat, desert the standard of the cross, and take to flight, you will be stripped of this truly holy sign, according to the statutes and customs of the Order, as having broken the vow you have just taken, and you will be cut off from our body as an unsound and corrupt member."

The officiating knight then fastened the robe on the new brother, tying it with strings round his neck, and saying; "Receive the yoke of the Lord: it is easy and light, and you shall find rest for your soul. We promise you nothing but bread and water, a simple habit, and of little worth. We give you, your parents and relations, a share in the good works performed by our order, and by our brethren, both now and hereafter, throughout the world." To this the newly professed knight answered, "Amen. So be it." Then the brother who had received him, and all the knights present, embraced and kissed him in token of friendship, peace, and brotherly love, and the ceremonies were terminated by the prayers of the priests, who implored grace and succour for the new knight.

St. John the Baptist, named in the vow, was not the original patron of the Hospitallers; at least the St. John of Jerusalem, adopted by the first devout Italians, who built and served in the hospitals, was neither the Baptist nor the Evangelist, but an inferior saint, a native of Cyprus of much more modern times, surnamed the "Almoner," or the "Charitable," who had been patriarch of Alexandria, and who, when Jerusalem fell into the hands of the Saracens (in the seventh century), sent money and provisions to the afflicted Christians, and liberally supplied such of them as fled into Egypt. This was a fit patron for an association professing to cure the sick, to lodge the houseless, and aid the poor; but when the Hospitallers were organized by the Pope, and became a regular military order, to the honours of which none but the great and noble could aspire, it was thought suitable, according to the notions of those times, to choose a saint of higher rank, and accordingly, John the Baptist was substituted for John the Almoner, and remained ever after the patron of the knights.

NATURAL ANALOGIES.—No. II.

WE have now to notice another very important element of animal and vegetable life, namely, heat, which by various causes is constantly drawn off from everything in which it resides. One of the grand generatives of heat is motion, and we accordingly find that motion is inseparably connected with animal and vegetable life, for it is probable that even the circulation of sap in vegetables, and the action of the atmosphere around them, generates some degree of caloric. It seems, however, necessary that animals should have more of this principle residing in them than plants, and they therefore enjoy at will that which happens to the latter involuntarily; though animals also have within them constant motion independent of will. This may be affirmed of those animals which spend much of their time in a torpid state; for it is plain that even at that period the digestive organs are in action; for when they wake they feel hungry—a thing which could not happen unless their last meal had been absorbed by the system. One exception to the rule here laid down, seems to be the existence of toads when closely immured in stone, yet it is probable that even they have some circulation or other internal motion. But the conservation of heat, when generated, so as to counterbalance its tendency to escape, has also been the care of nature; hence the skins of animals, with all the further defences of hair, feathers, down, fat, and the like; for it is evident that each of these assists in retaining caloric no less than in protecting animals from injury. It is amidst the ice of the north that those thick furs are found which enable the quadrupeds so clad to defy the rigour of their native climate, and it is probably with the same intention that the whale, which has been destined to hold a place among warm-blooded animals, and yet to have its abode in the Arctic seas, is provided with a mass of blubber beneath the skin, which is unquestionably powerfully retentive of heat. It may be thought that the thick and warm skins of carnivorous animals in the torrid zone are superfluous, but it must be remembered that these animals are much exposed to the damp and cold night air.

With regard to vegetables, the heat which rises to the surface of the earth imparts its influence to their roots. The results of this tendency of heat to ascend are as general as they are beneficial. After a frost, for instance, has chilled the surface of a lake or river, the layer of water next below the surface, being warmer and therefore lighter, ascends, and in its turn sustains the effects of the temperature. The freezing influence is thus held in check till it has acted on as many successive surfaces as the depth of the water will allow it to present, till at length, having sufficiently chilled the whole mass, ice begins to be formed. At the same time heat is constantly ascending from the earth, warming the yet unfrozen water at the bottom, whilst the ice that is already formed excludes the external air, and thus checks the influence of the frost. Hence also cold winds are abated of much of their keenness by passing over a large tract of ocean, since ever as they advance, fresh warmth is imparted to them from the water.

It has already been suggested that all animals derive their support either directly or indirectly from vegetables, and we might therefore expect that there should be extraordinary provisions for the supply of this universal banquet; and in this expectation we are not deceived. Of these provisions, the most efficacious may perhaps be considered to be the existence of a vegetating principle, so eager, as it were, to develop itself, and at the same time so subtle, that it seizes on the most barren spot and takes root in apparent solidity. A mass of stone is not long exposed to the open atmosphere, before it is covered by a species of

moss. The moss thus produced decays and forms earth, and the process of vegetation soon covers it with larger plants. Rocks that have risen from the ocean have thus been converted into verdant islands, the deposit of vegetable earth being here accelerated by the decay of many substances thrown up from the sea.

Another provision for the rapid production of vegetables is the amazing rapidity with which they propagate. It is true that in the three Linnæan classes, monœcia, diœcia, and polygamia, every blossom does not contain seed, since in these classes the same flowers do not possess stamens and pistils, but in those which are prolific we cannot even attempt to number the flowers; yet each of these is furnished with a vessel containing several seeds, almost every one of which may become a plant.

Another provision for bringing our principle to bear is this, namely, that no vegetables prey on each other in the sense in which many animals do so; for although the plants called parasitical may derive their support from the vegetables on which they grow, the life of the nourished is nevertheless compatible with that of the nourishing plants the former does not live by the immediate extinction of the latter, as is the case with carnivorous animals.

With regard to such creepers as have a root of their own and yet sustain themselves on other plants by means of minute teeth which penetrate the bark, (the ivy for instance,) it seems now to be ascertained that they do not abate anything of the vigour of their protector, all their nourishment being received through their own roots, and it is possible that even the parasitical plants may find sufficient to support them in the outermost integument of their involuntary host, without requiring any portion of its sap.

If we proceed to the animal kingdom we perceive the principle of conservation in full action. The smallest and weakest genera are ever the most prolific. Legions of insects are swallowed every summer's day by numerous and voracious enemies, but the propagation of the former is so astonishingly rapid, that though the feast of nature is unceasingly spread in plain, flood, and forest, yet not a single species becomes extinct; and the same may be said of the small quadrupeds which hourly fill the appetite of various races of carnivorous animals. We may instance the rabbit, which throughout its whole life is incessantly hunted by the weasel, the stoat, the wild cat, and many other destroyers, yet so prolific is this perpetual fugitive, that it multiplies its numbers at a vast rate.

In these and the preceding examples we see, therefore, first, that the moment of greatest weakness is not inconsistent with security, as that also is the period of the utmost minuteness of form under which each organised being exists; secondly, that the production of everything is in exact proportion to its consumption.

Cure of Ague by Charms.—Secret remedies often succeed in curing agues among the lower classes of society. A clerk to the Mendicity Society was famed for the cure of ague by some secret remedy. He was a patient of mine, but though I requested him to tell me his secret, he refused to impart it. It is sometimes by merely inspiring confidence that secret remedies succeed in curing ague. In the life of Lord Chief Justice Holt a curious anecdote is recorded. It appears that, when a young man, Holt had a flow of animal spirits which could not well be restrained, and he happened on one occasion, with some companions, to stop at an inn in the country, where they contracted a debt of such amount that they were unable to defray it. In this dilemma they appealed to Holt to get them out of the scrape. Holt observed that the innkeeper's daughter looked remarkably ill, and was told by her father she had an ague. Hereupon he gathered several plants, and mixed them together with a great deal of ceremony, afterwards wrapping them in a piece of parchment, upon which he had scrawled certain letters

and marks. The ball thus prepared, he hung about the young woman's neck, and the ague did not return. After this the never-failing doctor offered to discharge the bill, but the gratitude of the landlord refused any such thing, and Holt and his companions departed. When he became Lord Chief Justice, a woman was brought before him accused of being a witch. She was the last person ever tried in England for witchcraft. She made no other defence than that she was in possession of a certain ball which infallibly cured ague. The ball was handed up to the judge, who untied it, and found it to be the identical ball which he had made in his youthful days for the purpose of curing the woman's ague and paying his own bill. Baron Dimsdale mentions an old shoemaker who was famed for curing ague. The baron asked him how he succeeded, or what remedy he used? "Oh!" said the shoemaker, "I may tell you; I cure people by pretending that I can cure them. People say that I can cure the ague; and when they come to me I say that I can cure them, and then I go into my garden and bid them wait till I return; I cut a twig off some tree, cut nine notches in it, and then I bury it in the garden, and tell the patient I bury the ague with it. I obtain confidence on account of the charm which people think I possess; and by performing these and other ceremonies it generally succeeds so well, that the individual has no return of his ague."—*Armstrong's Lectures.*

Season for Visiting the Lakes.—As most travellers are either stinted, or stint themselves for time, the space between the middle or last week in May, and the middle or last week of June, may be pointed out as affording the best combination of long days, fine weather, and variety of impressions. Few of the native trees are then in full leaf; but, for whatever may be wanting in depth of shade, more than an equivalent will be found in the diversity of foliage, in the blossoms of the fruit-and-berry-bearing trees which abound in the woods, and in the golden flowers of the broom and other shrubs, with which many of the copses are inter-vened. In those woods, also, and on these mountain sides which have a northern aspect, and in the deep dells, many of the spring flowers still linger; while the open and sunny places are stocked with the flowers of approaching summer. And besides, is not an exquisite pleasure still untasted by him who has not heard the choir of linnets and thrushes chanting their love-songs in the copses, woods, and hedgerows of a mountainous country; safe from the birds of prey, which build in the inaccessible crags, and are at all hours seen or heard wheeling about in the air? The number of these formidable creatures is probably the cause why, in the narrow valleys, there are no skylarks; as the destroyer would be enabled to dart upon them from the near and surrounding crags, before they could descend to their ground-nests for protection. It is not often that the nightingale resorts to these vales; but almost all the other tribes of our English warblers are numerous; and their notes, when listened to by the side of broad still waters, or when heard in unison with the murmuring of mountain-brooks, have the compass of their power enlarged accordingly. There is also an imaginative influence in the voice of the cuckoo, when that voice has taken possession of a deep mountain-valley, very different from any thing which can be excited by the same sound in a flat country. Nor must a circumstance be omitted, which here renders the close of spring especially interesting;—I mean the practice of bringing down the ewes from the mountains to yearn in the valleys and enclosed grounds. The herbage being thus cropped as it springs, that first tender emerald green of the season, which would otherwise have lasted little more than a fortnight, is prolonged in the pastures and meadows for many weeks; while they are farther enlivened by the multitude of lambs bleating and skipping about. These sportive creatures, as they gather strength, are turned out upon the open mountains; and with their slender limbs, their snow-white colour, and their wild and light motions, beautifully accord or contrast with the rocks and lawns, upon which they must now begin to seek their food. And last, but not least, at this time the traveller will be sure of room and comfortable accommodation, even in the smaller inns.—*Wordsworth's Scenery of the Lakes.*

* * * The Office of the Society for the Diffusion of Useful Knowledge is at 59, Lincoln's Inn Fields.

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CAMBRIDGE.—No. II.



[Caius Gate of Honour, Cambridge.]

THE several colleges of which the University of Cambridge is composed owe, in the greater number of instances, their present wealth and importance as much, or more so, to the favours and benefactions of a succession of patrons and friends as to the endowments of the original founders. To give, therefore, in our limited space, a separate history of each college would be useless, for it must either be, necessarily, a partial account, or else exhibit a catalogue of names uninteresting to the general reader, with details of endowments each very similar to the other. We must content ourselves with a general view.

The Cam forms nearly a semicircle round the town and University. There are two principal streets in the

town: the first, Trumpington Street, into which the road from London runs; the second, Regent Street, leading from the Colchester road. These two streets, under other names, meet at the opposite end of the town. Between Trumpington Street and the Cam is St. Peter's College, the oldest college in the University, and the first in order in entering the town from the London road; a little farther on, nearly opposite to St. Peter's, is Pembroke College; then, on the same side with St. Peter's, filling up the space between the street and the Cam, are Catherine Hall, Queen's College, King's College, Clare Hall, Trinity Hall, Caius College, Trinity College, and St. John's College, with the Senate House, and Public Schools and Library of the Uni-

versity. On the same side of the street with Pembroke College are Corpus Christi or Bene't College, and Great St. Mary's, the University church. The remaining six colleges stand, each detached, in different parts of the town: Magdalene College on the north bank of the Cam; Sidney College, Jesus College, Christ College, Emmanuel College, and the new foundation of Downing College, on the south and south-east sides of the town.

Since the year 1820, a spirit of general improvement has pervaded the University, as a corporation, and the governing bodies of the colleges; the result has been a series of extensive alterations, and a number of additions, in the university and college buildings. The increasing number of students annually resorting to Cambridge had rendered the existing accommodation deficient*; and the increasing value of the property of the University and of the colleges, and consequent augmentation of the funds, have not only, in many instances, enabled the accommodation to be extended, but have led to some fine architectural improvements. Of buildings erected since 1820 by the University, the chief are, the Observatory, begun in 1822 and finished in three years, but to which additions are now making; and the Pitt Press, a splendid building, appropriated to the printing business of the University, which was opened on the 30th of April, 1831. The University has also purchased an old court from King's College at the back of the Public Schools and Library, for the sum of 12,000*l.*, which is to be appropriated to buildings for the purpose of affording additional lecture-rooms, greater accommodation to the Library, and new offices for the dispatch of the ordinary business of the University. This court is now being pulled down: at a congregation held on May 12, 1836, designs for the new buildings were voted for. The beautiful old gateway which belonged to the court has been purchased by Trinity College to be set up as an entrance to one of its quadrangles.

Of college improvements, independently of extensive re-edifications, the chief are, the new quadrangle of Trinity College, called King's Court, in honour of George IV., who contributed 1000*l.* towards the expense of erecting it, of which the foundation-stone was laid in 1823; the great quadrangle of King's College, commenced in 1824; the new college of St. John's (erected since 1824), connected with the old by a covered bridge, like a cloister, of which a view is given in the preceding Supplement; and the new front and court of Corpus Christi College. Additions have been also made to Christ's, Emmanuel, Jesus, Sidney, Magdalene, and St. Peter's colleges; and important alterations are in contemplation for Pembroke College, for which a building fund is accumulating.

The grounds belonging to those colleges which lie on the banks of the Cam are formed into walks, several of which are very pleasant, and a few afford picturesque views. The celebrated Dr. Richard Bentley, Master of Trinity College, was amongst the first who led the way to those improvements of the grounds which have converted a quantity of fenny land into ornamental and useful pleasure grounds. "He laid out," says Bishop Monk, "those beautiful walks on the opposite side of the river Cam which are so great an ornament and convenience to Trinity College and to the University. This ground, previously called the Back Green, had been purchased above a century before by the exchange of more than thirty acres of land in the outskirts of Cambridge; it appears, however, to have been left in its original state of a fen. In the year 1717 and 1718, the present walks were formed, and the beautiful avenues of lime-trees—the very perfection of academic groves, were planted." Dyer, writing upwards of

* In 1748 the numbers on the boards were 1500; in 1813, 2805; in 1824, 4489; in 1836, 5467.

twenty years ago, thus describes the grounds of the colleges which skirt the Cam:—

"These grounds then, as they are now disposed, consist of several walks, with plantations of majestic elms, except one of a grand row of chestnuts, and two or three of limes. The walks are in general straight, and Cam moves near them; not crowned about here with much of his sedge, nor yet with cheerful underwood, but with slow sullen course. Milton, therefore, was always for abusing him, whether writing in Latin or English*. The narrow bed of the river does not admit of large magnificent bridges, but one by the late Mr. Essex, an ingenious architect, formerly of this town, is of great elegance and universally admired.

"It may be admitted that the public walks of our sister University have some superior charms over those we are now describing: the walks are generally more winding, without so many formal straight lines and acute angles; the trees have greater variety of foliage, (and consequently, you have bolder lights and shades,) and there is more of underwood and shrubbery amidst their fine oaks, beech, birch, and elms. * * But still our walks have their peculiar beauties, adapted to the place, and the walk planted with limes from Clare Hall forms a vista, lengthened, and of admirable effect. You might say, perhaps, that Oxford has not anything of the kind equal to this. Taking into consideration the beauty and grandeur of the several buildings to be seen from Clare Hall, or King's College, Oxford must yield to Cambridge: nor must you say this is not Grasmere nor Keswick; there is no scene of the kind throughout all England that can be compared with these. The aspect, too, is the best that could be, both for the walks and effect on the adjoining buildings†."

Peter's House, or St. Peter's College, as already intimated, is the oldest of the Cambridge colleges. It was founded by Hugh Balsham, or Bedesdale, as he is sometimes called. This was in the beginning of the reign of Edward I. Balsham was made Bishop of Ely in the year 1257, and this year is commonly assigned as the date of the foundation of the college. But Balsham, at first, only bought two hostles, or hospitia, which he formed into one house, in which students lived rent-free, but at their own expense. The house, or hospitium, did not become a college for many years afterwards—somewhere between the years 1274 and 1284, for the precise date is not ascertained. The distinction to be drawn between an hospitium and a college‡, is, that the one was a kind of monkish or ecclesiastical house, which might rise or fall like an inn, according to its celebrity; the other, being founded by a royal license or charter, and endowed with property, became a legalised and perpetuated institution. Thus Peter House was at first merely an hospitium, in which, says Fuller, "the students that lived therein (grinded formerly by the townsmen with unconscionable rents for the place of their abode) thankfully accounted themselves well endowed with good chambers and studies freely bestowed upon them." Afterwards Balsham bestowed revenues on the house for the support of a master, or head, fourteen fellows, two Bible clerks§, and eight poor scholars; and having obtained a royal letter, license, or charter, became thus the founder of the first college in Cambridge Uni-

* Hence in his "Lycidas:"

"Next Camus, reverend sire, came footing slow,
His mantle hairy, and his bonnet sedge."

And in his Latin Elegies.

† Dyer's 'History of the University of Cambridge.' Pp. 232—234.

‡ College is a word from the Latin, used to denote a collection of individuals (men or women) united for certain objects, or brought under certain rules—in fact, a society.

§ Bible clerks were originally appointed to read the Bible during the meals or refectations of the fraternity.

versity. In the fourteenth year of Edward II. (1320 or 1321) there is a royal license for appropriating the advowsons of certain churches, to the value of 40*l.* per annum, to the founding of houses for the use of scholars, notwithstanding a statute. Clare Hall, which is next in antiquity to Peter House, was founded in the first year of Edward III., A.D. 1326. It was originally an hospitium, or hall, called University Hall, founded by the then Chancellor of the University, in which students lived, as they did at first in Peter House, rent free, but at their own expense. Being burned down, it was rebuilt, endowed, and received a royal charter, through the means of Lady de Clare, grand-daughter of Edward I., from whom it takes its name. Pembroke Hall was also founded by a lady, the Countess of Pembroke, in the twenty-fifth of Edward III. Her husband, it appears, had been accidentally slain at a tournament held in honour of their wedding, which affected the lady so much as to lead her into retirement, and to spend her income upon charity, of which the founding of Pembroke College is an instance. King's Hall and St. Michael's Hall were founded in 1322 and 1324, but they were merged in the great foundation of Trinity College. Merton Hall had the same end. We find mention of a hall of the Annunciation of the Blessed Virgin Mary; and no doubt there were even at a late period many others, which have ceased to exist.

Gonville and Caius College was founded by Richard Gonville, but it may be said to have been re-founded by Dr. Caius. He was physician to Queen Mary, afterwards master of his own college, and zealously attached to its interests, and to those of the University at large. This worthy though eccentric man built three gates to the three courts of his college, on the first of which is inscribed "Humilitatis," the gate of humility; on the second, "Virtutis," the gate of virtue; and on the third, "Honoris," the gate of honour: a view of this gate is given in the wood-cut on the first page of this Number. Trinity Hall was founded by William Bateman, Bishop of Norwich.

The founding of Corpus Christi or Bene't College differs somewhat from all the others. [Bene't is a contraction for Benedict.] All the other colleges were founded by individuals who either had a real love for literature, and were desirous of promoting its interests, or fell in with the fashion of the time, which pointed to the rich and noble as the supporters of religion and science. But Corpus Christi College was founded by two societies, who had in view a particular object. These two societies were the guilds of the Blessed Virgin and Corpus Christi*. Guilds, or guilds, in early times, were not merely associations of individuals practising certain trades or "mysteries," but there were also many guilds for religious and charitable purposes. The two guilds which founded this college were associations which combined something of the character of a friendly society with that of an association for devotional exercises. Both sexes were admissible; the funds were appropriated to the relief of distressed and sick members; on the death of a member the society, in costume, attended the body to the grave; and sums of money were laid out in masses for the soul of the deceased. The society of Corpus Christi being rich and in a flourishing condition, proposed to found a college in which young persons might be trained up in academical learning, and fitted for making supplications and masses for the souls of the fraternity. A union was proposed in the work by the society of the Blessed Virgin; and a license, or royal charter, having been

* *Corpus Christi*, Body of Christ. We are apt, now-a-days, to recoil from the application of similar names to societies, colleges, and halls; but we should recollect that they were bestowed by our ancestors from a sentiment of religious veneration.

procured, the college of Corpus Christi, commonly but wrongly called Bene't College, (from Benedict parish, in which the guild of Corpus Christi had its hall,) was founded. The societies have vanished, but their work remains.

The college which was next founded far surpassed any of the previous foundations. This was King's College, founded by Henry VI. He originally instituted a small seminary for a rector and twelve fellows, in the year 1441; but in 1443 he entirely changed his plan, and endowed the college for a provost, seventy fellows and scholars, (to be supplied in regular succession from Eton, founded and endowed about the same time,) three chaplains, six clerks, sixteen choristers, and a music master, (who now possesses also the office of organist,) sixteen officers of the foundation, twelve servitors for the senior fellows, and six poor scholars. King's College has some peculiar privileges. The head of the college, called the Provost, has absolute authority within the precincts; and by special composition between the society and the University, its undergraduates (under certain restrictions) are exempt from the power of the proctors and other university officers, within the limits of the college; neither by usage do they keep any public exercises in the schools, or are any way examined for their bachelor of arts' degree.

The "glorious chapel" of King's College has been very frequently described. Its erection, owing to a number of opposing obstacles which interrupted and retarded the work, was spread over a period of nearly one hundred years. The foundation stone was laid in 1446, by Henry VI. in person, who however did not contemplate the erection of a structure so exquisitely elaborated. The stone-work was completed in the reign of Henry VII.; the glass-work was not put up till the beginning of the following reign; and a great part of the casing of the chapel was not finished till 1532. The following general survey of the chapel is from Dyer's 'History of the University':—

"It is impossible for any one to approach this building without reverence. The architectural skill of the fifteenth and sixteenth centuries is here displayed in its utmost perfection. It appears, from the will of the founder, Henry VI., that it is not built exactly according to his original plan, but the work was continued, though too parsimoniously, by Edward IV. and Richard III.; the chapel, its roof, exterior decorations, turrets, and pinnacles, together with its interior oratories, and the glazing of the windows, were completed by Henry VI.; but the finishing hand was given to it by Henry VIII. As it now appears, it would not be sufficient to say, that, as an architectural work, it is the pride of Cambridge, and surpasses in magnificence any edifice at Oxford; it is allowed to be superior to every Gothic building in Europe. Without, the prodigious stones of which it consists,—the vast buttresses by which it is supported,—the loftiness and extent of the building,—the fine proportions of the tower and pinnacles;—and, within, the grand extended view,—the admirable arched roof, without the support of any pillars, displaying all the richness of its fine fan-work,—and the matchless paintings on its windows,—all combine to impress the beholder with emotions which can be better felt than described."

In Dallaway's 'Observations on English Architecture' are the following remarks on King's College Chapel, which, in addition to an interesting description of the building, give a brief condensed sketch of the progress of ecclesiastical architecture in England, from its first rude efforts to the triumph of the art in the construction of such a work as the one before us:—

"The great cause of our admiration, upon the first entrance into this chapel, is the unity of design; from which it appears to be smaller than in reality, or than



[The Pepysian Library, Magdalen College, Cambridge.]

on frequent examination it would do;—a circumstance invariably happening to those who visit the church of St. Peter at Rome. The grand whole instantly fills the eye, without any abatement or interruption. When we find leisure for the detail, we may admire the infinite parts which compose the roof, and the exquisite finishing of the arms and cognizances of the House of Lancaster; and regret that, being so large, they should be stuck against the finely-wrought pilasters, like monumental tablets in a parish-church. The stained glass heightens the effect of the stone-work, and gives it a tint which can never be produced by any wash of lime, with whatever substance it may be combined, when the light passes through diminutive squares of raw white glass. As so much is added to architectural excellence, how great soever it may be, by a sober and uniform tone of colour,—somewhat, if the expression be allowable, between glare and sombre,—the modern improvers of our cathedrals have shown judgment in abandoning the plain white or yellow which pervade the cathedrals of Ely and Wells. King Henry VI., as it is evident from the injunction he makes, in the instance of both his colleges, against superfluous masonry, never intended a roof so splendidly elaborate as that designed and perfected under the auspices of his successors. His objection was not to the difficulty or impracticability of, the work, for several of great

extent had been erected prior to and during his reign, but to the enormous expense it would require.

“Considering, therefore, the roof of King’s College Chapel as the utmost effort of constructive skill, and the paragon of architectural beauty, it may not be irrelevant to offer a short view of the works of that nature, of sufficient celebrity, which had been previously finished in England.

“The more ancient roofs in those cathedrals where the Norman style prevails were composed of wood, in rafters only; but, in the progress of architecture, those were concealed by pannels, and painted in a kind of mosaic of several colours. The surface was even made flat by these means, as in the transept of Peterborough. The naves both of that cathedral and of Ely afford instances of the ancient timber roof.

“Of the vaulting with stone we have many examples of a date as early as the reign of Henry III. It was formed by groined arches, springing from corbels in the side walls between the windows; and when first invented was composed of plain ribs of stone, called cross-springers, with a key-stone in the centre of them, and the interstices were filled up with some lighter materials. There was always a space of several feet intervening between the vaulting and the roof. As the principle of their construction became better known and practised about the reign of Edward III. by the

more frequent and complicated intersection of the cross-springers, more ornament was introduced, and delicately-carved orbs and rosettes were added where unnecessary as to any architectural purpose. The arch of the vault was pointed, and that highly-embellished part of it did not at first extend many feet on either side the common centre.

"This circumstance is remarkable in the choir at Lincoln, Our Lady's Chapel at Ely, and many others erected in the early part of the fourteenth century. In the choir at Gloucester this elaborate work is spread over the whole with equal profusion. To reach a higher degree of excellence, probably because a greater difficulty, the architects of the latter era invented an arch, flattened in the centre, and with the groins hemispherically wrought. That particular species of architecture and carving called "fan-work," which, from its extreme cost and delicacy, had been hitherto confined to cloisters, small chapels, and tombs, was now applied to whole roofs, and with an equal defiance of expense and labour, made to supersede all the excellence of construction and finishing that had been previously attainable. It is a fair conjecture that this new method was either known to few of the master-masons, or was too expensive for frequent adoption upon a large scale.

"The tradition that Sir Christopher Wren declared, that 'the construction of King's College Chapel was beyond his comprehension, but that if any person would describe to him where the first stone should be placed, he would then be enabled to effect it,' is not altogether deserving of implicit credit. Lord Orford took it from the notes of G. Vertue, who might have been told it, among other wonders, by the verger who showed the chapel. The point of difficulty will be solved, in a great measure, if, instead of contemplating the roof as a whole or entire work, we consider the space only which is contained within four buttresses as independent and complete in itself, and the connexion between each several compartment concealed, for the purpose of producing a very surprising architectural effect of elongation. One proof that the vault consists of many such parts, is the agreement with master-masons for each "severey" or partition, to be engaged for as a distinct undertaking, and to be paid for in that proportion. Each "severey" is bounded by two strong arches. Allowing this to be the case, the length ceases to be wonderful, excepting on account of the labour and expense.

"The hemispherical carved courses of the groins, as I am assured by a very able master-mason, might have been worked on the ground, and with the key-stones, though of a ton weight each, raised to that height by means of an ancient instrument called a "Lewis," of the powers of which a curious account appears in the tenth volume of the 'Archæologia,' p. 223. My informant has frequently elevated stones of nearly twice the weight by the same means in the magnificent restorations at Arundel Castle. The idea that the carving was excavated from a solid arch, as the easier mode, is not worthy attention, nor would it have been very practicable where

'Ancient art her dædal fancies played
In the quaint mazes of the crisped roof.'

After this lengthened notice we can but briefly allude to the painted windows, in themselves, apart from the building in which they are placed, extraordinary works of art. These windows are each nearly fifty feet high, and are filled with delineations of the principal events recorded in the Bible.

Between the founding of King's College and Trinity College—both royal foundations, the first the greatest college of its time, the second the largest and leading college of Cambridge—there were five colleges founded. These were Queen's College, Catharine Hall, Jesus

College, Christ College, St. John's College, and Magdalene College. "I confess," says Fuller, "building of colleges goeth not by planets, but by Providence; yet it is observable that * * * when one once brake the ice, many follow in the same beaten track of charity." We may therefore pass over the history of each separate foundation, the details being very similar, observing, by the way, that St. John's College, the second college of Cambridge, ranking next to Trinity College in extent, was founded by Lady Margaret, Countess of Richmond, mother of Henry VII., who also founded Christ College, and to whom the University is indebted for the first professorship which appears on its records. The history of Trinity College is thus given by the present Bishop of Gloucester in his 'Life of Bentley:—

"It was founded by King Henry the Eighth, about one month before his death, and endowed with revenues taken from the dissolved monasteries. Its earlier years were somewhat clouded by the struggles between the Romish and Reformed Churches; but upon the accession of Elizabeth the foundation was completed, and placed upon its present liberal footing, giving ample encouragement to the pursuit both of ornamental and useful knowledge, and opening the emoluments of the college, as rewards to the merit of the students, in the most unrestricted manner. Accordingly, we find that Trinity College rose at once from the infancy to the maturity of its fame: and from that epoch to the civil troubles in the reign of Charles I., a period of little more than eighty years, it flourished in a manner unexampled in the history of academical institutions. The illustrious names of Lord Bacon and Sir Edward Coke stand at the head of a list of its members distinguished in the theatre of public life. During the reigns of Elizabeth and James I., a period when extraordinary attention was shown to merit in ecclesiastical appointments, a greater number of bishops proceeded from this than from any other society; and it was observed, about the beginning of the seventeenth century, that Trinity College might claim at the same time the two archbishops of Canterbury and York, and no less than seven other principal prelates on the English bench. So greatly did theological learning flourish here, that when the present translation of the Bible was executed by order of James I., no less than six of the translators were found among the resident fellows of the college. In elegant literature it claimed an equal celebrity; having, in addition to many of the Elizabethan poets, produced those two constellations of wit and learning, John Donne and Abraham Cowley; while it boasts, in the next generation, the still more illustrious name of Dryden. So high was its reputation during the period of which we are speaking, that fellows of the society were chosen to fill the headships of other colleges in the University.

"The civil troubles and the intolerance of the Puritans brought ruin and confusion upon this as well as other societies; all the royalist fellows were expelled, along with Dr. Thomas Conder, the master, one of the most exemplary characters that ever presided over a college. The Restoration did not bring back the prosperity or the spirit that had been banished by the evil times; nor could the society recover the paramount station which it had so long maintained. There were indeed some circumstances peculiarly auspicious to Trinity College. Dr. John Pearson and Dr. Isaac Barrow, two of the brightest characters which grace the period of Charles II., were successively masters. In the mean time the fabric nearly attained to the state in which it continued till the year 1824; the beautiful quadrangle, half of which had been built in the mastership of Dr. Thomas Neville, the Dean of Peterborough, and in a great degree at his own cost, was now completed by the munificence of

two restored fellows, Dr. Thomas Sclater, and Dr. Humphery Babington; and the noble library, an edifice unrivalled for magnificence and convenience, was erected by a subscription of the members, under the auspices of Dr. Barrow. Above all, the presence and example of Sir Isaac Newton might have been expected to sustain the spirit of a college, the scene of all his great discoveries, of which he continued many years a resident fellow. In spite of these advantages, the house was observed to decline in numbers and celebrity in the latter years of the seventeenth century*.”

We cannot here enter into the details of Bentley's connexion with Trinity College, nor the extraordinary contests which he maintained with the University and with individuals. He was appointed master in 1700, and died in 1742, at the age of eighty. Very nearly the one-half of his long term of mastership was spent in struggles which affected his official existence, but which arose not out of conflicting principles but tempers.

Emmanuel College and Sidney College were founded in the years 1584 and 1598, which completed the number of colleges, sixteen in all, until the year 1800, when the seventeenth, Downing College, received its charter. This latter college was founded according to the will of Sir George Downing, who died in 1749; but the appropriation of the estates and the granting of the charter were delayed by litigation. Nearly two sides of a quadrangle of the buildings of Downing College have been erected; but owing to the want of funds it is uncertain when the college will be completed.

The first college was founded towards the end of the thirteenth century; five during the fourteenth; four in the fifteenth; six in the sixteenth; and, after an interval of more than 200 years, the last college was founded in the last year of the eighteenth century.

The finest view of a portion of the college and university buildings is to be obtained in Trumpington Street, where, on one side, is Great St. Mary's, on the other the Senate House, Public Library, and King's College Chapel. The Senate House, a fine structure, is almost thrown into the shade by its vicinity to the chapel. It is built of Portland stone; its style of architecture is the Corinthian; the interior is 101 feet long, 42 broad, and 32 high. The public business of the University, such as examinations, passing of graces, and admission to degrees, is carried on here, and strangers wishing to observe the ceremonies are admitted into the galleries, which are calculated to contain 1000 individuals. Great St. Mary's is the University Church, in which, on Sundays and holidays, sermons are preached by graduates appointed in their turn by the vice-chancellor.

The most munificent of modern bequests to the University are those of Sir George Downing and Lord Fitzwilliam. The first, as already mentioned, is the foundation of a college, named after the donor; the second is that of the Fitzwilliam Museum. Lord Fitzwilliam died in 1816, and by his will gave his collection of curiosities, paintings, &c. to the University of Cambridge, together with 100,000*l.* South Sea Annuities, the interest of which is to be appropriated to the erection of a suitable building for the Museum. In the meantime a temporary building is fitted up for its reception. The ground for a suitable structure for the Museum has been purchased and cleared; and in the course of the present summer (1836) its erection will be commenced.

While mentioning bequests we may allude to the Pepysian Library, the gift of the well-known Samuel Pepys to Magdalene College, of which he was a member. A view of the Pepysian Library is given in the

* Monk's 'Life of Bentley' vol. i., p. 140.

present Number. The publication of Pepys's Diary, a few years ago, has thrown open many curious and interesting particulars respecting the domestic manners of the English towards the close of the seventeenth and commencement of the eighteenth centuries. The following extract, referring to a visit he made to Cambridge, shows the ordinary routine followed in the election of university officers:—

“Up and between eight and nine mounted again, and so rid to Cambridge; the way so good that I got very well thither, and set up at the Bear; and there my cousin Angier come to me, and I must needs to his house; and there found Dr. Fairbrother and a good dinner. But above all, he telling me that this day there is a congregation for the choice of some officers in the University, he after dinner gets me a gown, cap, and hood, and carries me to the schools, where Mr. Pepper, my brother's tutor, and this day chosen proctor, did appoint a M.A. to lead me into the Regent House, where I sat with them, and did vote by subscribing papers thus: “Ego Samuel Pēpys eligo magistrum Bernardum Skelton (and which was more strange, my old school-fellow and acquaintance, and who afterwards did take notice of me, and we spoke together) alterum è taxatoribus hujus Academiæ in annum sequentem.” The like I did for one Briggs, for the other taxor, and for other officers, as the vice-proctor for Mr. Pepper, and which was the gentleman that did carry me into the Regent House.”

On another occasion he visited his own college “as a stranger,” and a mixture of gossip and feeling which the passage displays is amusing:—

“To Cambridge, the waters not being now so high as before. Here lighting, I took my boy and two brothers, and walked to Magdalene College; and there into the butteries as a stranger, and there drank of their beer, which pleased me, as the best I ever drank; and hear by the butler's man, who was son to Goody Mulliner over-against the college, that we used to buy stewed prunes of, concerning the college and persons in it; and find very few that were of my time.”

On the 2nd of May, 1534, the University of Cambridge renounced the supremacy of the Pope, and the next year surrendered to Henry VIII. all its charters and muniments, through its chancellor Cromwell, whom the king had appointed to receive them. These records were restored about a year afterwards, and the University was reinstated in the full exercise of its privileges. From the death of Henry to the reign of Elizabeth, the University was in a disturbed and unsettled state; the great struggle carrying on between the two parties which divided the nation would, of course, affect the University materially. On Elizabeth's accession the scale was turned; the University enjoyed the royal favour, and rested in peace till the breaking out of the Civil War in the reign of Charles I. This was a perilous and trying time. The University had early declared in favour of the king, and, as a natural consequence, suffered when the Parliament predominated. A majority of the masters and fellows were expelled from their colleges; troops were quartered in the town who were not over tender of the buildings and property of the University; and commissioners came down to root out all traces of superstition. “We pulled down,” say the commissioners, speaking of St. Peter's College, “two mighty angels with wings, and divers other angels, the four Evangelists, and Peter with his keys on the chapel-door, together with about one hundred cherubims, and many superstitious letters in gold. Moreover we found six angels on the windows, all which we defaced.” It is a wonder that the painted windows of King's College Chapel escaped, but they are supposed to have been spared at the intercession of

Dr. Whichcote, who had been appointed Provost of King's College by the Parliament, or, as some conjecture, by Oliver Cromwell himself, who retained a veneration for his *alma mater*. Cromwell had been a student of Sidney Sussex College. The Restoration brought a new series of ejections from office, but since that period the history of the University may be said to be merged in that of its colleges.

When the University is honoured with a royal visit, Trinity College claims, by right, the reception and entertainment of the visitor. Queen Elizabeth, in the sixth year of her reign, spent five days at Cambridge, during which she visited all the colleges. James I. was fond of a visit to the University, being delighted with the dramatic entertainments which were produced for his amusement. This facetious royal pedant expressed his predilection for certain colleges, by saying, that if he lived at Cambridge, he would pray at King's, eat at Trinity, and sleep at Jesus. Queen Anne visited Cambridge in 1705, accompanied by her husband and her whole court. "Alighting at the Regent Walk, before the schools, she was received by the Duke of Somerset, the chancellor, at the head of the University, and addressed in a speech by Dr. Ayloffe, the public orator. From thence her Majesty went in procession to the Regent House, where, agreeably to ancient custom, was held the congregation of the senate, termed Regia Comitia, at which the University conferred degrees upon all persons nominated by the Royal command; the presence of the sovereign dispensing with statutable qualifications and exercises. Afterwards the Queen held a court at Trinity Lodge, where she rendered the day memorable by conferring knighthood upon the most illustrious of her subjects, Sir Isaac Newton. A sumptuous dinner was then given to the royal visitor and her suite, in the Hall of Trinity College, which had been newly fitted up and decorated. Whoever is acquainted with the large sums which *alma mater* has since expended on public objects, will be surprised to learn that she was then so poor as to be compelled to borrow 500*l.* for the purpose of this entertainment. The royal party, after attending evening service at the magnificent Chapel of King's College, took leave of the University, and returned the same night to Newmarket*."

The last royal visit with which Cambridge has been honoured was that of George II. in 1728. On this occasion fifty-eight persons received the degree of D.D., and other degrees were bestowed in great numbers. The banquet is described as exceeding in splendour all that had been previously witnessed on the shores of the Cam. The king took his leave in the evening, after marking his satisfaction with the University by a present of 2000*l.* towards the building of the Senate House.

The students of the University are divided into classes, as briefly intimated in the last Supplement. The act of entering the University is called "matriculation," on which occasion the student takes certain oaths to observe its discipline, &c.; and during his first year he is termed a "freshman." He may enter as a sizar, pensioner, or fellow-commoner. The sizar is the "poor scholar" of ancient times. He had formerly a number of menial services to perform, such as waiting on the other students and fellows at dinner; and, in return, received his education and food gratuitously. This was not held to be any degradation; for the "poor scholars" were in the habit of going about the country begging: and in a parliament held at Cambridge in the reign of Richard II., in 1388, a statute was passed (the 7th of that year) entitled "the punishment of beggars able to serve, and a provision for impotent beggars," in which poor clerks of either university were required to have the license of their chancellor in going about begging.

* Monk's 'Bentley,' vol. i., p. 183.

The menial services which used to be exacted of the sizars are long since abolished; and though, as the 'Calendar' phrases it, they are "generally men of inferior fortune, who usually have their commons free, and receive various emoluments;" yet any person going to Cambridge in the expectation of being able, as a sizar, to get over his term of education without cost, on account of receiving his "commons free," and of getting "various emoluments," would find himself mistaken. The expenses of the sizar, even with the help of this, are considerable. In Southey's 'Life of Henry Kirke White,' the author says, "Mr. Simeon promised to procure for him a sizarship at St. John's; and, with the additional aid of a friend, to supply him with 30*l.* annually. His brother Neville promised 20*l.*; and his mother, it was hoped, would be able to allow 15*l.* or 20*l.* more. With this, it was thought, he could go through college."

Claudius Buchanan, who came to London a poor adventurous Scotch youth, without money or friends, but who afterwards rose to eminence in the religious literary world, was sent to Cambridge at the expense of a benevolent gentleman: wishing to save his patron expense, he proposed to enter as a sizar in Queen's College, but was dissuaded from it, and entered as a pensioner.

There are two colleges which do not receive sizars—and in others the number is limited: but in all except at Trinity College, the gown of the sizar has a distinctive mark. This, along with little exceptions in the regulations which have come down from old times, and imply inferiority in the sizar, are now regarded, with our altered habits and feelings, and the worship which is paid to rank and wealth, as affixing a kind of brand on the sizar. It is no wonder, therefore, if all who can possibly help it, avoid entering as sizars, and enter as pensioners. The class of pensioners embraces the great body of the students, from the young man struggling with insufficient means to acquire a university education, to the youth whose parents can afford him a handsome yearly allowance. But we may here mention that there is not such a practical difference between the sizars and other students of Cambridge, as between the servitors and other students of Oxford. Sizar and servitor are usually defined as being synonymous in the two universities; and in their origin they doubtless were: but the servitors of Oxford form a distinct caste, not mingling with the other students, while the sizars of Cambridge associate with the pensioners on a tacit understanding of familiarity and equality. "Fellow commoners," as the term imports, and as the Calendar informs us, "are generally the younger sons of the nobility, or men of fortune, and have the privilege of dining at the Fellows' table." Of course the expenses of such students vary with the style in which they choose to live.

Many of the sizars and pensioners endeavour to avail themselves of what are termed exhibitions and scholarships. These are endowments, like the bursaries in the Scotch universities, which are paid in money to the students who are fortunate enough to procure them. Some are in the gift of particular colleges, schools, &c., and there are a few in the hands of some of the city companies of London. The conditions on which the students receive the proceeds of these endowments are various. The number of exhibitions and scholarships in Cambridge is upwards of 830. Some are so low in value as 4*l.*; the rest run from that sum up as high as 70*l.* per annum. A few are paid in weekly instalments. There are a few scholarships in the gift of the university at large, the obtaining of which is counted a very honourable thing, because they are bestowed on publicly testing the progress and ability of the candidates. The "Craven scholarships," founded by Lord Craven, yield the student an annual sum of 50*l.*

There are also a number of prizes annually bestowed, in the shape of gold and silver medals, money, and books, in order to excite the energies of the students. The prizes for the encouragement of literature, free and open to the whole university, amount to upwards of 1300*l.*, three-fourths of which are given for classics and English composition, the remainder for mathematics. The amount of the annual prizes in the colleges is about 600*l.*, two-thirds of which are given for the encouragement of classical literature.

On entering college, the student has to deposit in the hands of the tutor a certain sum as caution-money. The caution of a nobleman is 50*l.*; of a fellow-commoner 25*l.*; of a pensioner 15*l.*; and of a sizar 10*l.* At all the colleges there are also certain fees to be paid, and a fixed sum for tuition, exclusive of whatever extra or private instruction the student may choose. The quarterly payments for tuition are, for a nobleman, 10*l.*; for a fellow-commoner 5*l.*; for a pensioner 2*l.* 10*s.*; for a sizar 15*s.*

The student comes under the discipline of the college to which he has attached himself, which is ruled by the master, or head of the house, and the senior fellows. He must enter a particular college before he can matriculate, or have his name placed on the University Register. Minor transgressions of the college or university discipline are punished by pecuniary mulcts, or what are termed impositions, which are generally huge tasks assigned to the student; greater offences are punished by rustication, which means banishment from the University for a limited period; and gross offences incur expulsion altogether. The student is expected to attend morning-prayers, absence from which constitutes an offence; and he must be within the college walls by a certain hour in the evening if he does not wish to incur another penalty. The college-gown is also required to be worn by the student, as an article of dress, at all times. Should the proctors see any person whom they may suspect to be a student without this necessary appendage, they generally demand "his name and college," with a view to inflicting punishment.

Whipping was a punishment inflicted on the students within the last two centuries. Dr. Johnson, in his 'Life of Milton,' says, "I am ashamed to relate what I fear is true, that Milton was the last student in either University that suffered the indignity of corporal correction." Johnson's authority for Milton's being whipped at college is an inference from some expressions in one of the great poet's Latin Elegies; but Todd, in his 'Life of Milton,' throws doubt upon it; and the fact probably was, that for some offence, real or supposed, Milton was "rusticated" for a short period. This, however, does not affect the general fact, that whipping was a punishment in use in the Universities. Milton was a sizar of Christ's College, Cambridge.

The court of the vice-chancellor possesses an extensive jurisdiction, both of a civil and criminal nature, for the maintenance of discipline, the punishment of offences, and the decision of causes in which any members of the University are concerned. The sole judge is the vice-chancellor, who acts, however, with the advice of his assessors: but an appeal lies against his decisions to the delegates, who are either three or five individuals chosen by the senate for that purpose. This academical court, though armed with great and comprehensive authority, is by no means one of frequent resort. A vice-chancellor sometimes passes through his year of office without being once called upon to preside as judge.

The various gowns of the members of the University attract the stranger's attention who visits Cambridge for the first time. These habits are in their origin ecclesiastical. Each different degree in the University has its different habit,—the doctor of divinity has three, one of which, a scarlet cloth gown with sleeves lined

with rose-coloured silk, a cassoc, sash, and scarf, is only worn on state, or what are termed *scarlet* days. The dress in which he usually appears is a black-silk gown with full round sleeves. The different classes of students are known by their habits,—the nobleman, fellow-commoner, pensioner, and sizar, except at Trinity College, where there is no difference between the pensioner and sizar. But the gown for the same class of students is not uniform in all the colleges.

The ecclesiastical patronage vested in the different colleges is very extensive, and consists of livings in a large number of the counties of England and Wales. Of these there are fifty in the county of Cambridge. The colleges have also the appointment of the masters to a number of schools, among which are, Westminster School and the Grammar School of Shrewsbury.

The heads and fellows of the colleges are mostly all elective, the head by the fellows, and the fellows fill up vacancies among themselves. In these are vested the government of each college, and the appointment of the numerous subordinate officers belonging to each. The crown appoints to the mastership of Trinity College and the Bishop of Ely makes a selection from two candidates presented by the Fellows of Peter House, for the mastership of that college. The bishop also appoints the master of Jesus College. Gilbert Wakefield tells a humorous story of one of the masters of Jesus College, a Dr. Boldero, who is buried in the chapel. This gentleman had been treated with particular severity during the protectorate, for his attachment to the royal cause, in which the Bishop of Ely had been an equal sufferer. On a vacancy of the mastership, Boldero, without any pretensions to the appointment, plucked up his spirits, and presented his petition for the place to the bishop. "Who are you?" said the bishop; "I know nothing of you, I never heard of you before!" "My lord, I have suffered long and severely for my attachment to our royal master, as well as your lordship has. I believe your lordship and I have been in all the gaols in England." "What does the fellow mean? Man! I never was confined in any prison but the Tower." "And, my lord," replied Boldero, "I have been in all the rest myself." The bishop made Boldero master.

The first professorship, (as previously mentioned,) which was founded in Cambridge, was the Margaret professorship of divinity, which takes its name from the foundress, Margaret, the mother of Henry VII. The celebrated Erasmus was made the Lady Margaret's professor of divinity in 1510. He was the first who read public lectures in Greek in the University of Cambridge. Henry VIII. founded a number of professorships; several of the other professorships, as indicated by their names, were established by private individuals. Such is the Lucasian, founded by Thomas Lucas in 1663, and which was held for a time by Newton; the Plumean, founded by Dr. Plume, in 1704; the Woodwardian lecturer; the Lowndean professor of astronomy; and the Norrisian and Jacksonian professors. Other offices have also been established by private individuals,—the Christian Advocate, whose business, during his tenure of office, is to reply to some particular point in the arguments of those who do not believe, wholly or in part, the Christian revelation, &c.

Ray—one of the first of English naturalists—gave an impulse to the study of botany at Cambridge: but it was not till many years after his time that a botanic garden was established. Dr. Richard Walker, Vice-Master of Trinity College, bought a piece of ground, about four acres in extent, for the sum of 1600*l.* This he formed into a garden, and presented it to the University. In connexion with the garden there is a professorship of botany, founded by the University.

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SCENERY OF NORWAY—WESTFJØRDDALEN.



[Valley of Westfjórddalen.]

WESTFJØRDDALEN, in the parish of Tind, in the district of Christiansand, may be considered the most picturesque valley in Upper Tellemarken, and perhaps in Norway.

The Maane Elv (river) takes its course through this valley from west to east, and empties itself into a branch of the lake called Tindsjøen, which is 612 feet above the level of the sea. This river has its outlet from another lake, Mjós Vandet, considerably higher, at a short distance from which it rushes over perpendicular rocks at the extremity of the valley, forming in its fall the celebrated Riukand, or Smoking Cataract. The valley is inclosed to the south by the mountain Gousta, one of the highest in Scandinavia, and by a lower ridge of mountains towards the north.

VOL. V.

On entering Westfjórddalen from Tindsjøen, opposite to a farm called Ornoes, a small river is seen falling over the sides of a precipitous rock from a height of 300 feet. Proceeding farther up the valley, one is delighted with the verdure of the plain. Near the middle of the valley is situated Dal church, an old-fashioned wooden building, with nothing remarkable in its structure or appearance; and adjoining to it is a farm-house, which contains two beds, and affords some poor accommodation for travellers. Not far from this building, which is immediately under the Gousta mountain, is a wooden bridge, after crossing which, a road or path conducts up the mountain. Vegetation, as is usual in high mountains, becomes more and more stunted as one ascends. On arriving at the so-called

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Langfond Sæter, situated on the Gousta (Kneer) Knees, a table-land extending for several English miles, we are 2360 feet above the valley, and 3674 feet over the level of the sea. The ground rises gradually till one arrives at the foot of a sort of pyramid of large uneven stones, of which, from this spot to the top, the mountain is composed. At a short distance from Langfond Sæter, all vegetation ceases; and even at the hut of that name, one is already above the region of pine and fir. The only plants that are here found are the *betula nana*, *salix reticulata*, *salix lanata*, and juniper bushes. The ascent upwards over the pyramid of stones (where vegetation ceases entirely) is extremely difficult, and often dangerous, nor does the arrival at the summit repay the trouble of the ascent. From the top of Gousta to a short distance down its sides, there are, even in the midst of summer, several patches of snow in the different clefts of the mountain; but they are so soft, that one cannot walk upon them without risk.

Authorities differ respecting the whole height of Gousta. As a medium, it may be estimated at about 6000 feet above the sea. From the numerous fissures and chasms, the general ruinous formation, and other appearances of this mountain, it appears probable that those who have supposed the Gousta once to have been considerably higher than it now is, may not have been wrong in their conjectures. Its most imposing appearance is from a sudden winding in the valley, about four English miles from the Lake Tindsjøen, whence the sketch is taken, and where it breaks upon the traveller in all its majesty.

After descending the mountain and proceeding westward up the valley beyond Dal church, the traveller arrives at a farm called Ingolfsland, belonging to a peasant of the name of Eystein Hansen, a man as remarkable for his strength of mind and character as for his bodily powers. By him are decided most of the quarrels and disputes in his district, so that law-suits are but seldom known. One of his gigantic works worthy of mention is the following:—A road was to be formed towards the Riukand Foss*; a piece of this road was allotted, of about twenty yards in length, to two peasants; but on account of the numerous stones that lay in their way, and among others two of immense size, they considered it beyond the possibility of human strength to perform the work in less than two days, and refused to undertake to do it in a shorter time. Several others were applied to, and among them some of the strongest, but all refused. Eystein declared that it was no greater task than he could alone accomplish in one day, and accordingly, at sunset, after the other peasants had retired from their labour, he repaired again to the spot, broke asunder the larger of the two stones, cast the pieces over the side of the rock, and then, with the assistance of a crow-bar, removed the other off the line of road, dug a path of two yards in breadth, one in depth, and twenty in length in the short space of six hours, besides working cheerfully with the other peasants during the following day. The removed stone, which is still to be seen, must weigh considerably more than two tons.

The general character of this man is modest, gentle, and unassuming, and he frequently assists his wife in her domestic affairs. Being conscious of his great strength, he anxiously avoids getting into disputes; and although like a lion when irritated, he has been frequently known to overlook insults, particularly from strangers, for none who know him would willingly incense him; and many anecdotes might be told of this Hercules. He is now growing old, and fills the honour-

* The roads in Norway, in the country, are made and kept in order by the peasantry,—those for a certain distance around the towns, by the citizens.

able appointment of præstenselled-hjælper (the clergyman's assistant) in the parish in which he resides, in his native valley, highly respected by all who know him.

Leaving Ingolfsland and proceeding farther up the valley, the ground rises imperceptibly until one arrives at the farm Vaæ, when the road becomes more difficult and the river Maane flows through a valley thickly covered with pines and firs, about 1000 feet below the road, so that it is only at times that the traveller can get a sight of it. At a distance of about five English miles a smoke or vapour rising up among the wild, black, grey, mountainous country is now seen, which alternately rises and falls, denoting the nearer approach to the Riukand, and giving the first imposing impression of the stupendous dimensions of this magnificent cataract.

Proceeding farther, the traveller arrives at the commencement of the so-called Maristien (Mary's Path), and has a distinct view of the fall, being then opposite to it, at a distance of less than half an English mile. From this spot the fall is seen to the greatest advantage. It precipitates itself down the rocks with a tremendous roar through a cavity in the rocks not more than twelve feet wide, having the appearance of a vast quantity of foam dividing and convulsing itself in a great variety of forms as it dashes headlong towards the bed of the river, which, to some considerable distance, is completely covered with a kind of froth, the vapour of which rises like smoke to a considerable height among the adjacent mountains. In the bottom of the valley into which this cataract precipitates itself is a basin or reservoir, in the form of a wedge, between two high mountains, whose naked and apparently smooth sides seem to form an angle of 50° or 60° with the horizon.

In order to come to the top of the fall, one is either obliged to go by a path four English miles round the mountain; or to pass up the Maristie, which runs in a zigzag direction in the side of the mountain to a height of 700 or 800 feet, in some places so narrow that one cannot place the feet side by side, and whence one false step would inevitably precipitate the traveller into the gulf below. Those travellers who are apt to be giddy crawl along this path on hands and feet, but the mountaineers go up and down with the greatest facility.

As it is almost impossible to get to the foot of the cataract, it is difficult to measure its perpendicular height; and on this subject authorities differ from between 500 and 600 to 900 feet. Some English travellers have given the latter height; truth may lie between, and we may call it about 700 feet high. In the winter, the particles of water freeze, and form a curious natural filagree work, while a kind of tube forms itself around the fall, through which the water dashes with a fearful noise.

The land is in places sown with barley, hemp, and oats, and planted with potatoes. They sow and plant in June, and collect the harvest at the end of August. In the higher latitudes vegetation is still more rapid. The cattle are let loose to graze in the spring, previous to their removal to the mountains, which, on account of their altitude and the quantity of snow on them, cannot take place before the summer is somewhat advanced, when they are removed from the lower pasturage to the Sæter pasture on the mountains, in the centre of which is a small shed or hut for the accommodation of the women and children of the peasantry, who follow and attend the cattle, and employ themselves in herding, making butter, cheese, &c. It is interesting to see the cattle collecting around the Sæter hut in the evening, called thither by the sound of the lühr, a sort of long trumpet, composed of two pieces of wood hollowed out in the centre, and bound round

with birch bark. The cattle are driven down from the mountains about the end of September.

On account of the number of stones which lie concealed among the grass, the peasantry are unable to use the scythe for mowing, and therefore substitute a kind of sickle, which they handle with uncommon dexterity. The grass is fine and rather short, but of a nutritious quality. In England, and in countries where agriculture has attained a higher degree of perfection, it would be thought impossible to attempt making hay in such land, and many would be even fearful to let their horses graze on such pasturage.

In the spring, when the snow begins to dissolve, the inhabitants are in the habit of strewing charcoal over the snow, with the view of attracting the rays of the sun, and thus hastening the appearance of summer. Ploughing frequently begins before the snow is off the ground; the snow being turned up together with the soil, it being considered as a manure, at the same time that it contributes to the warmth of the earth.

The houses in Westfjórddalen are generally of but one story or ground-floor, comprising two or three rooms and a kitchen. The entrance is commonly supported by two rudely-turned pillars, but which are not unpleasing to the eye. At a short distance from the dwelling-house is the stolpebod, a sort of family magazine. On the ground-floor (which is elevated some distance from the earth, like the corn-stacks in England) are preserved corn, dried flesh of goats, sheep, and other cattle. In the upper story are kept home-spun and woven cloth, linen, &c. On ropes from the roof are suspended many woollen and linen coverlids of various colours and patterns. On the walls are hung the wedding-dresses* of the heads of the family, with the belts worn with them, the bridal head-dress, and other holiday clothing. The interior of some of the houses in Tellemarken is decorated likewise with passages from Scripture, exhorting the inhabitants to industry, temperance, and the fear of God. These inscriptions are painted on the cornices of the ceiling or on the tops of the bedsteads. It is likewise a custom, for every 1000 dollars the peasant saves or puts out at interest, for him to procure a large copper kettle, which is placed on a shelf over the door in the principal room of the house, and only serves to denote the wealth of the occupant, it being never used.

The floors of Westfjórddalen, from all appearance, are never scoured, but only swept, so that all the dirt that has collected from the time they were first laid still remains, and is trodden down by the family. This causes a disagreeable sensation in the traveller; and it has been remarked by a highly respectable Norwegian gentleman, speaking of the mountaineers, that the higher one proceeds up the mountains the less attention is paid to the embellishments of life. In these alpine regions the bare necessities of life are obtained with so much difficulty that those things which serve to adorn it are scarcely thought of. Many of the peasants are doomed in a manner to pass through two winters every year; namely, as soon as the snow is off the ground about the beginning of June, they go up the mountains to the Sætters, where all the inclemencies of November still reign;—after spending two months in a desert, where no blossom is to be seen, and where they are exposed to storms of snow, sleet, and night frosts, and always chilled by piercing winds, they return to their fire-side, and to the more rigorous nine months' winter.

The food of the peasantry is chiefly milk, which is used in a variety of forms; flatbród, or flatbread, a kind of cake of oat or barley-meal, baked on a gridiron, but very thin, not a sixth part so thick as the Scotch girdle cakes, and of a very inferior quality. They have

* Weddings are kept up with feasting, dancing, &c., for eight days, sometimes longer.

also various kinds of dried flesh, particularly that of goats and sheep. In the summer, when the cattle are up the mountains on the Sætters, the traveller finds it difficult to obtain sweet milk, but sour is to be had in abundance, frequently more than a month old. It is skimmed on the Sætters, and after making cheese of a part, the remainder is sent down to the farm, where new and old are mixed together. It is thus of a cloudy and greenish colour, and disgusting to the lowland palate. Butter is always to be had, and of excellent quality. Ale is not in very general use, but where it is found it is very strong, one barrel of malt being used to one of beer; but it has a very disagreeable taste, being commonly flat and thick. Ardent spirits are but little in use; a few years ago tea and coffee were only known by name, but now begin to be used occasionally.

The lakes and rivers supply the inhabitants of Westfjórddalen plentifully with fish, of a similar kind to those found in England.

In the woods and forests are a quantity of large birds, among which is a species not found in England, called the Tiur, of the size of a turkey: the male resembles in colour the cock-of-the-wood; the female is brown spotted. Some few bears and wolves are to be found in the woods; the latter come down into the valleys and into the vicinity of the towns during hard winters. There are hares in great plenty, and various other wild animals. Some few reindeer are also found on the mountains. A peasant boy of fourteen years of age shot one near the Gousta a few years ago. The mountains are frequented also by a species of bird called in Norwegian 'the ryper,' of the size of a wood-pigeon, similar to the ptarmigan found in the highlands of Scotland. This bird in the summer is in colour similar to a pheasant, with white wings; in the winter, like the hare in the high northern latitudes, it changes colour and becomes white. It is good to eat, and is found in great numbers.

The natives have a small but hardy and active race of horses. It is almost inconceivable how these animals are able, heavily laden, to climb up and down the mountains; they are frequently exposed to break their legs among large and uneven stones, and in descending the steep and smooth sides of the mountains and rocks. They are very dextrous in crossing rivers, over some of which a rude bridge is thrown, consisting of two coarsely-hewn trees: the rider gives the animal the rein loose on the shoulder; it then places its nose close to the fragile structure, and with the greatest facility carries the rider across in security. Sometimes at the conclusion of a fatiguing journey, and in a great heat, the horse is forced to swim a river, and subsequently to remain shivering during the rest of the night in the open air.

The peasantry are tall, well-proportioned, and handsome; the muscles of the thighs and legs, particularly the latter, are of large proportions; this may perhaps be accounted for by their continual wanderings and fatigues among the mountains. In character they are honest, and possess good sound understanding, cheerfulness of mind, and they are highly decorous in their demeanour. The vice of drunkenness is rare among them. Almost every Norwegian peasant can read, and few are without a bible. They are hospitable and generally gentle, but passionate and revengeful when irritated.

The formation of the Gousta, the rocks of the Rinkand, and other mountains in Westfjórddalen, according to Professor Esmark, are of mica slate, chlorite slate, and the transition formation. The latitude of the valley, as taken by Professor Hansteen at Ingólfsland, is 59° 53'.

GRECIAN COSTUME.



[Woman of Castri, the ancient Delphi.]

THE valley of Delphi is bounded on one side by Parnassus, and on the other by Mount Cirphis. Perpendicular to this valley is the plain of Crissa, almost covered with olive-groves and confined by rugged mountains. The vale of Delphi, on the contrary, is a continued plantation of vines. The city of Delphi, the most illustrious city in Phocis, and so famous in ancient times for its oracles, stood at the head of the valley on a rugged and uneven slope above which towered the summits of Parnassus. A small village called Castri now occupies the site of this memorable spot. Close by are two fountains supposed to be those of Castalia and Cassotis, the "vocal streams" of which the priestess drank before she uttered her prophecies. According to Lord Byron, the Castalian stream which poets sing of has "a villainous twang;" and poor Dr. Chandler, who washed his hands in it, instead of being inspired, tells us that he was instantly chilled, and seized with a tremor which rendered him unable to stand or walk without support. This was what Byron called catching an "Epic fever." The complaint, however, was cured by the doctor's wrapping himself up in warm furs, and drinking freely of wine. No quarto of rhyme followed it. Mr. Hobhouse says, "We (that is, Lord Byron and Mr. H.) drank deep of the spring; but (I can answer for myself) without feeling sensible of any extraordinary effect."

The water of Castalia descends through a cleft of Parnassus, and is composed, in a large proportion, of the melted snow that descends from the upper part of that mountain. This accounts for the chill and tremor, and Chandler adds, that "perhaps the Pythia who bathed in this icy fluid mistook her shivering for the god Apollo." A little above Castri, penetrating deep into the sides of Parnassus; is an immense cave, supposed to be the Pythian: to the entrance, which is not large, the people of Castri have fitted a wooden door, and they have paved the upper part of the sacred cave, which now serves as a dark stable for their cattle. At

evening, when the lengthening shades of Parnassus stretch all across the plain, the women and the girls are seen driving their cows to this place of shelter; and whether engaged in this office, or in tending their flocks in the field, or in going a journey from one town or village to another, they have almost invariably the primitive distaff in their hands, and go along spinning cotton or linen thread in the manner represented in our wood-cut. The very graceful costume there represented, is peculiar to the women of Castri and the neighbourhood, but not so this practice of ambulatory spinning, which we have seen pretty generally practised by the Greek women in all parts of the country, continental and insular, and in Asia Minor. It also obtains among the peasantry of the South of Italy, where, in default of cross-country posts and the means of communication, women are pretty generally employed to carry letters, small parcels, &c., from one place to another. These journeys are always made on foot, and *bare-foot*, and in spite of the incumbrance of their bags and parcels, they almost invariably carry their distaffs with them, and spinning as they go, they will walk three miles an hour on an average. They are dignified with the appellation of *corrieri* (couriers).

In No. 8, vol. i. p. 70 of the 'Penny Magazine,' we gave an account of a Greek wedding. We here present our readers with the "lively effigies" of a Greek bride, as she is dressed and equipped during the three days of her public exhibition, and real or assumed meekness and passiveness.



[Greek Bride in Bridal Costume.]

We must mention that the marriage we formerly described was one we witnessed in Asia Minor, and that in Greece proper and the islands there is a considerable variety in the dresses used on the solemn occasion, and some inconsiderable differences in the ceremonies. The large globular cap, with its beads and relievos in front, and its vari-coloured plumes or knots of feathers mixed with silk and wool on the top, was not worn by our Asiatic bride; but the long shreds of tinsel that descend over the shoulders and breasts

like dishevelled hair were worn by her in still greater confusion than by the bride with downcast eyes now before us. Wherever they can be obtained (and when the family possess them not, they borrow from their neighbours) necklaces are heaped upon the maiden's bosom, and her arms are covered all over with bracelets. In most parts of continental Greece two chaplets of lilies and ears of corn (the emblems of purity and abundance) are put on the bride's head or placed by her side on the sofa after they have been used in the church.

We should inevitably lose ourselves were we to attempt to enter into the minutæ, the complication, and (at times) incongruity of the bridal dress of the Greeks; and therefore instead of this we will slightly allude to one or two strictly classical observances which are still found in districts where the national manners have been least affected by Turkish intermixture and other foreign intercourse. We should mention, however, that the bride's attendants and female friends partake of her gaudy attire, and that face painting, and the sticking on of gold leaf and tinsel, are considered as indispensably requisite to their proper appearance on such an occasion. Doctor Holland mentions having seen a young girl just come from a wedding feast, with a large round spot of gold leaf underneath each eye, her cheeks at the same time being coloured to excess; and we ourselves once met half-a-dozen young ladies similarly equipped, who in the broad glare of day looked more like Bacchantes than bride's-maids.

On the eve of the marriage the Grecian bride is conducted by her young female friends to the bath, the porch of which is hung with a few flowers and a little myrtle. The next morning, at dawn, the bridegroom in his choicest attire, accompanied by his favourite companions, repairs to the house of his affianced, whence the procession soon starts. It is opened by a number of young men with guitars and cymbals, who dance along the highway, singing the praises of the young couple. At a fitting distance in the rear of these noisy heralds, advances the bride slowly, and to appearance reluctantly, as though she were going like Iphigenia to the slaughter: she is supported by her father and her bride-woman—her steps are measured, her eyes fixed on the ground. Whenever she passes the door of a relative or friend, flowers, nuts, and cakes are showered from the windows, being accompanied in their descent upon her head by words of good omen and prayers for her happiness. The mother of the bride, moving along with other matrons, all gay and gorgeous, closes the procession. In the evening, after all the long church ceremonies have been performed, the bride leaves her home processionally, and the bridegroom, leaving his, meets the procession half-way, with all his party crowned with wreaths of flowers, and flourishing torches in the air, or dashing them upon the ground, conducts his wife to what is henceforth to be their common residence. When they arrive there, the bride is supported, or rather lifted up, by her father and mother, that she may in no wise touch the threshold of the door, which was esteemed sacred in the classical ages, and which the ancient comic writer Plautus suggests ought not to be touched by the bride.

In the Latin poem of the 'Epithalamium,' written by Catullus nearly nineteen centuries ago, nearly all these circumstances are mentioned; and Homer, eight centuries earlier than Catullus, has given a description of a wedding, which closely agrees with what takes place at the wedding of a Greek of the present day*.

Hitherto we have spoken almost exclusively of the peasantry and common people. The ceremonies, the amusements, the picturesque costume we have been describing, are not things confined to the high places—

* Iliad, book xviii.

they are spread among the people, and give interest and beauty to the fields and high roads. The dress of the Grecian ladies of rank or wealth, except at Smyrna, Constantinople, and a few other large commercial towns, does not differ very materially from that worn by the Turkish ladies. When out of doors, however, the two classes are easily distinguishable: the Turks muffle up and cover their faces in muslin, and wear yellow morocco slippers; the Greeks show their faces and are obliged to wear slippers of a dingier hue; besides which there are other points of difference between their promenade costumes. Further details would be tedious, but the dress of a Greek lady of Athens may be thus described generally: a scarlet cloth skull-cap on the head, more or less richly worked in gold, with pearls, &c.; an open and flowing gown, with very full sleeves, mostly made of silk and richly embroidered; an inner vest, also richly worked, and sitting to the body almost as closely as a man's waistcoat; very wide muslin drawers tied above the ankle, and concealed by the gown; morocco bottines without soles, thrust into well-soled morocco slippers, or coloured silk stockings and loose shoes; a long and rich veil, put on with singular gracefulness, and the cestus, or zone, or girdle (a beautiful shawl), which rests upon the hips, and is kept down in front by two silver clasps or bosses. This zone is altogether distinct from the waist, which is formed by the foldings of the dress below the bosom: it is, in short, a kind of second waist, and though very classical, and the image of the ancient cestus, is one of the few things at once "classical and Greek" that strike us as being ungraceful. In cold weather a short satin pelisse, or spenser, trimmed and lined with furs, is worn over the dress.

As compared with the equipment of our females, the great merit of the Greeks is, that they do not cramp, lace up, twist, and artificially distort the body and limbs Nature has given them. From the princess down to the peasant girls that follow their cows with the distaff in their hands, stays and tight corsets are unknown; and instead of cramming their feet into tight, unnaturally small shoes, they wear loose bottines



[Wife of an Archon (Athens).]

and slippers, or sandals that leave the toes, instep, ankle, and heel their free play, and do not (in quest of a Chinese perfection) imprison, weaken, and deform a most useful member, the real beauty of which does not consist in its smallness. Who has not admired the beauty of the feet of an infant as yet untouched by the shoe-maker's arts? For ourselves we have often admired the same kind of beauty developed and matured in the bare-footed peasant girls of Greece.

Against these virtues of omission we must, however, set off a sin of commission: wherever we had an opportunity of seeing them, the Greek ladies were much given to face-painting, affecting the most outrageous reds, whites, and blacks, and though not universally, their example was pretty generally followed by the wives and daughters of the common people and peasantry who could command the means.

BREAKWATERS.

PLYMOUTH, which is the second port of Great Britain, now possesses accommodations of the greatest importance as a naval station. Its capacious anchorage, its numerous inlets, and the advantages derived from the beautiful river Tamar, which pours its clear stream into the ocean beneath the walls of the dockyard, combine to render it one of the finest ports in Europe. But navigators had long complained that it was exposed to the gales from the south-west to the south-east, which, blowing directly into the harbour, produced a heavy sea; and at such seasons the shipping often suffered serious damage for want of proper shelter. Nevertheless, it is remarkable how long this objection was felt without any attempt to remedy the evil.

It was not until 1806, when Lord Howick (the present Earl Grey) being placed at the head of the Admiralty, the attention of the government was turned to this important object, it is believed at the suggestion of the Earl of St. Vincent. A careful survey of Plymouth Sound was made by Mr. Whidbey, in conjunction with Mr. Rennie. These gentlemen reported on the practicability of rendering the anchorage secure by means of a breakwater. The commencement of the undertaking was delayed; but on the Right Hon. Charles Yorke succeeding to the Admiralty, the engineers took measures for carrying the project into execution.

The plan adopted was to form an impenetrable barrier of large stones across the middle of Plymouth Sound, extending from east to west 1700 yards, and leaving an entrance on each side sufficiently capacious to allow the largest men-of-war an easy passage in and out of the harbour. The centre of the breakwater was to be 1000 yards in a straight line, continued 350 yards more at either end, at an angle of 120 degrees, by which form it was expected the force of the waves would be more effectually resisted. The breadth of the base was fixed at 210 feet, at the top 30 feet; and the depth from the upper surface to the bed of the sea 40 feet. It was computed that 2,500,000 tons of stone would be required to construct the whole work, and the entire cost was calculated at 1,171,000*l.* sterling.

Everything being determined, a quarry of limestone, or rather grey marble, containing about twenty-five acres, was purchased of the Duke of Bedford for the sum of 10,000*l.* This lying contiguous to Catwater, at the head of the harbour, presented a secure spot to embark the stones. Twelve vessels of a suitable construction were built in the dockyard, and forty others hired, to convey the stones to their appointed station. Seven hundred artificers and labourers of all descriptions were engaged for the whole service. The first stone was deposited on the 12th of August, 1812.

The vessels were laden and discharged by means of

the following contrivance:—Small iron trucks, each capable of carrying a stone of from two to six tons weight were conducted along an iron railway, leading from the quarry, through the stern-port, into the vessel's hold. Each vessel carried sixteen of these trucks. The place where they were to discharge their cargo was marked by buoys, and by sights erected on the shore. On arriving at the spot, the trucks, with their burdens, were drawn out successively to the entrance port, the fall of which dropped the stone into its place, while the carriage remained suspended by its tackle. In this manner a cargo of eighty tons was discharged in forty or fifty minutes.

At the end of two years the Breakwater was so far advanced as to prove a very sensible security to the harbour. The work stood the utmost fury of the elements until the winter of 1816-17, when some damage was done to the upper stratum of stones, which was washed over to the inner side, but produced no other mischief. It was the opinion of the oldest seamen that, had it not been for the Breakwater, even in its unfinished state, every vessel in Catwater would then have been wrecked.

In 1781 a work of a more stupendous nature than the Plymouth Breakwater was undertaken by order of the King of France, at Cherbourg, a port in the department of La Manche. This port is situated on the English Channel, and it was of the highest importance to the naval interests of France to render it a secure haven for shipping. While our coast forms a rocky barrier broken by frequent intervals, which present a secure retreat for our shipping, the whole line of the opposite coast of France consists for the most part of a low sandy shore, which offers scarce an opening deserving the name of a harbour. The port of Cherbourg was greatly exposed to the inconvenience which Plymouth formerly experienced. To remedy the defect M. de Cessart, Inspector General of Public Works, offered to erect a breakwater nearly four times the length of the one at Plymouth, and thus to convert the roadstead of Cherbourg into a safe anchorage for the French fleet. For this purpose he proposed to form the intended bulwark by sinking ninety huge cones, constructed of great beams of timber, strongly bolted together, which being placed in a line, should be filled with immense stones, and form a barrier capable of resisting the force of the waves. Each cone was to be 150 feet in diameter at the base, 60 at the top, and 70 in height, but these proportions were afterwards somewhat diminished. In June, 1784, the first cone was deposited in its place, and in the five following years seventeen more were sunk in like manner, but so great was the destruction produced by the violence of the winter's storms, that by the year 1790 the patience of the Government was exhausted, and the work abandoned, after expending upwards of 5,000,000 tons of stone, and incurring a fruitless expense of 1,300,000*l.* One of the cones held together fourteen years, another five years, six stood for about four years, and all the rest went to pieces within one year after they were sunk. The stones within were gradually wasted away, and scattered at the bottom of the harbour.

The object of rendering Cherbourg a secure port was nevertheless of so great political importance that, after an interval of several years, the French government made another effort to accomplish it by casing the irregular line of stones yet remaining with a coating of heavy stones, weighing from one to two tons each. By the year 1809 they had succeeded in raising part of this defence above high-water mark, and erected a small battery on it, which received a garrison of troops. But in a violent storm which ensued, this ill-compacted fabric gave way to the fury of the waves, and the whole, with the unfortunate soldiers and their families, were

swept into the sea. By sinking heavy masses upon the smaller stones, whose edges were already worn away by the long-continued action of the waves, they served as rollers when set in motion, and carried the superincumbent weight along with them. Since this period, the efforts which have been made to render Cherbourg a great naval port have been attended with more success. The sum of 5,000,000*l.* has been expended in forming a basin and constructing docks, and 2,000,000*l.* had been required before the year 1808, and previous to the above catastrophe, in constructing the breakwater, which was not completed in 1830.

At the entrance of the Bay of Delaware in the United States, near Cape Henlopen, there is a breakwater, which is intended not only to shelter vessels from the action of the waves, but to protect them against injuries arising from floating ice descending the bay. This breakwater consists of two walls of stone, one of which extends 1200 yards in a straight line. At the distance of 350 yards from the upper or western end of the breakwater (which space forms the upper entrance), a similar wall is carried on in a direct line, forming an angle of 146° 15' with the breakwater. This latter wall is intended as an ice-breaker. These works, which were partly commenced in 1830, were intended to contain 900,000 cubic yards of stone, composed of pieces of basaltic rock and granite, weighing from a quarter of a ton to three tons and upwards. The depth of water, at low tide, is from four to six fathoms.

Josephus, the celebrated Jewish historian, relates that, "When Herod founded the city of Cæsarea, he determined to give the inhabitants a secure haven as a shelter for their vessels. This he effected by letting down, twenty fathoms deep into the sea, vast stones of fifty feet in length, eighteen in breadth, and nine in height." The weight of each stone, therefore, must have been at least 600 tons. The mole which he thus constructed was called Procymathia, or "the first breaker of the waves." It may be stated that stones still larger than those mentioned by Josephus, still form the sub-basement of the great temples of Balbec in Syria. Mr. Wood, an English traveller, in 1751 measured three placed together in the Temple of the Sun, which covered a space of 175 feet. The great pyramid consists of 207 layers of stones, each of which is of great length, and not less than from two to five feet in thickness. These, and similar examples, leave us at a loss to conjecture by what mechanical contrivances the nations of antiquity wielded those huge masses which they employed in erecting their mighty edifices.

SIAMESE NARRATION OF A SHIPWRECK ON THE SOUTH COAST OF AFRICA.

A VERY curious and circumstantial relation of the shipwreck of a Portuguese vessel in 1686 at the Cape Agulhas, the southern extremity of Africa, with the subsequent adventures of the crew, was communicated by a Siamese attached to the embassy sent from Siam to the king of Portugal. The truth of the narration was vouched by the respectability of the relator, Occum Chamnam, an officer of distinction in Siam, and corroborated in its principal circumstances by the testimony of several Portuguese who were in the vessel. The whole account is curious, from the extraordinary circumstances of the Siamese party being placed among persons differing from them in country, manners, religion, and almost every other particular, and at last left alone in deserts inhabited only by savages of whom they had had no previous idea. The account is taken from the voyage of the Jesuit Tachard, to whom it was communicated by Occum Chamnam, during a subsequent voyage from Siam, in the suite of the Siamese embassy to Louis XIV.

The crew of the vessel consisted of 150 men, and the passengers were nine Siamese mandarins and their

suite, three Catholic missionaries, and some other persons. In consequence of mistaking the Point Agulhas for the Cape of Good Hope, the vessel struck, on a fine moonlight night, the 27th of April, 1686, when all on board were in the greatest imagined security. In a few minutes the vessel filled,—the most horrible confusion prevailed,—some knelt to utter a prayer, while others endeavoured to lighten the vessel by cutting away the masts or throwing overboard any articles within their reach. A few were swept off the deck by the waves which broke over the vessel; and some who tried to save themselves by swimming were drowned in the attempt.

After some time, a certain degree of calm took place on board, and the survivors began to think more coolly of means of saving their lives. They made rafts of planks, and all got on shore safe, but cold, wet, and hungry. The poor Siamese party, accustomed to the luxury of a warm climate, suffered severely, and after a miserable night, the narrator, a good swimmer, resolved to return to the vessel, to try to pick up some clothes and victuals. By the help of a sort of hurdle, he found means to bring on shore some pieces of cloth of gold, six bottles of wine, and some biscuit. His object was, he says, singularly enough considering the circumstances, to find gold and precious stones; but he could only obtain what we have stated, and even that as it turned out was of little value to himself.

"There were some Siamese," says he, "who escaped without any clothing whatever. I gave them the cloths I had brought from the ship, with which they covered themselves; but judging that if I intrusted the wine to their care it would not last long, I gave it to a Portuguese who had shewn me a great deal of kindness, and told him I would give it all to him except a little which I might want for myself from time to time. On this occasion I experienced how weak friendship is against want, and how little we care for others when we are ourselves in necessity. This friend gave me a little glass of wine every day for the first two or three days of our journey, while we were expecting to find water; but when thirst came on, and no fresh water was to be procured, my request for a small portion of what I had liberally given to him was so harshly repulsed with the reply that 'he would not give a drop to his own father,' that I was afraid to renew my request. As to the biscuit it was of no use, being soaked with sea-water: I could not touch a bit of it, it was so bitter and salt."

The party on shore took the first opportunity of reckoning their numbers, and they found that nearly 200 had escaped, so that the whole loss amounted to but seven or eight. The survivors, however, found little reason to congratulate themselves; they were cold and hungry, some had scarcely any clothing, and very few had saved anything eatable. Winter was approaching, and the nearest habitation of civilized man was more than a hundred miles distant, the only settlement at that early period being in the neighbourhood of the Cape, the road to which was over mountains and through rivers unknown to any but the natives. Some of the Portuguese had taken the precaution of getting their guns and some powder ashore, which were found useful on several occasions, particularly for making a fire at night, without which the poor Siamese had no doubt he should have died of cold.

The shipwrecked crew seem to have calculated on reaching the Dutch settlement in a day or two, and in their eagerness to arrive they left behind them the few provisions they had saved, that they might not be delayed on the road. But their first day's journey only brought them to a pond of fresh water, by the side of which they passed the night. The next day the Siamese were forced to linger behind in consequence of the weakness of the first ambassador, who was infirm; but that they might not lose the Portuguese body from whom

they were afraid to be far separated, they divided themselves into three parties, the first of which kept at a certain distance behind the Portuguese, so far as not altogether to lose sight of them; the second remained behind at an equal interval, and the third slowly proceeded with the ambassador. But all advance of the unfortunate man soon became impracticable. He begged his followers to leave him as the only means of safety, and requested that if they should be so happy as to reach the Cape, they would send some provisions for him with a horse to carry him on, if alive. However painful this separation was, it was inevitable; but the poor ambassador was not left to die alone. A youth of fifteen, son of a mandarin, would not quit a friend to whom he was attached, and a faithful servant could not be prevailed upon to leave his old master. The remainder of the party left those three persons to almost certain death, and followed the traces of the Portuguese, with whom they came up about midnight, and found them tired and hungry as themselves, without any provisions whatever.

The next day was like the preceding. A mandarin dropped with fatigue and was abandoned. The only food taken by any of the party was a few bitter herbs.

The fourth day brought some change. The wanderers met a few Hottentots, by whom they were conducted to a village of 400 or 500 persons; but they had not much aid from these men, who would give nothing nor sell anything but for tobacco or Dutch silver coin. Gold they refused, and even two large diamonds offered by the Siamese proved no temptation. One of the Portuguese luckily found a few pieces of Dutch money, with which he bought an ox; but the animal was divided amongst his own friends, and the poor Siamese could not get a bit of it. They found, however, that some gold ornaments pleased the Hottentots, and a quarter of a sheep was procured by the offer of more than one hundred pistoles' worth. With this, and a bason of milk bought for a few gold buttons, and the skin of the ox, which the Portuguese had thrown away, but which Siamese delicacy did not reject, they made more than one meal.

After a night passed amidst the dances and howlings of the Hottentots, (who appear to have been those natives whom we call Bushmen, though named indiscriminately Caffres and Hottentots in the narration,) the party resolved to continue their journey by the seashore, for the sake of the food they expected to find there, and probably from a fear of the savages. On the third day after they left the Hottentots, they saw a lofty cape which they fancied was the Cape of Good Hope; a near approach soon shewed the mistake, but they were consoled for the disappointment by finding a little rock in the sea covered with mussels, and a stream of fresh water close by, where they resolved to stay a day or two to recruit their wasted strength. On this day the Siamese lost another mandarin, and the narrator makes one of those reflections which shew that human nature is the same everywhere. "Misery," says he, "must have the power of hardening the heart. In any other situation, if I had heard of a friend dying in so miserable a manner I should have been inconsolable; but I hardly felt anything from the death of this mandarin, who was however my intimate friend. All that we did was to shew for a moment some regret at his death, and then we separated to look about for something to eat."

They remained by the rock of mussels two nights and one day, and then found their strength sufficiently recruited to venture to resume their miserable journey. They had found in the neighbourhood of the rock something which proved very useful to them: this was a sort of hollow stick, like a bamboo, which would hold water enough to supply a man one day: every one of the party provided himself with such a stick, and from

that time the misery of thirst was much lessened. On the first day of their resumed journey, the Siamese were luckier than the Portuguese, having met with a serpent which they found eatable, while their companions fasted. "It was not bigger than my thumb," says the narrator, "but it was as long as my arm. We put him on the fire without fear, and eat him all up, skin, head, and bones, without leaving a morsel. It tasted very well, and I did not make a nicer meal during our whole journey."

A day or two after this, on awaking in the morning, the Siamese found themselves alone, abandoned by the Portuguese, who had left them during the night: After seeking about on all sides, crying as loudly as they could, and searching in vain for a trace of the fugitives, the Siamese gave themselves up to despair; until at last the second ambassador, a man of courage and address, called all his party about him and made them a set speech. He excused the Portuguese for leaving them, because they could not go so fast as they did, and instanced their own conduct in leaving the first ambassador under similar circumstances; he then exhorted them to act as men who did not want a leader, but who knew how to conduct themselves, and explained to them that by following the sea-coast, they could not possibly go wrong. But the most curious part of his address was that relating to the respect due to the letter written by the great king their master. "My first, my only care in our shipwreck was to save this letter. I attribute my safety entirely to the good fortune which always attends anything which has once had the honour of approaching the supreme majesty of the great king whom we serve. From that moment you have all seen with what care I have carried it. When we encamped upon the mountains, I always placed it upon the summit, or at least above the heads of any of our party, and stationing myself a little lower, I remained at a respectful distance to keep watch over it. When we stopped in the plains, I attached it to the top of the highest tree that I could find near us." He then proceeds to direct that in case of his death the third ambassador may do as he has done, and that in this manner it may descend to the last survivor of the troop. "And if unhappily none of us arrive at the Cape of Good Hope, let the last man bury it on the summit of a mountain, if possible, or at least in the most elevated situation he can find, in order that the precious deposit may be free from insult and accident. Let him then prostrate himself, and die near it, showing in death the respect he owed it during life.

The influence of the sacred deposit seems to have extended itself to the whole party, who set out with vigour, in spite of pained and swelled limbs, and arrived at midday on the bank of a wide and rapid river. This they determined to cross; and for that purpose they tied all their scarfs together end to end, giving one end of this long streamer to the best swimmer amongst them, who would be able, when he reached the opposite bank, to help the others by pulling it as they swam. The attempt failed; their best swimmer reached with great difficulty the bank, but he suffered severely from bruises in the attempt, and was also obliged to let go his hold of the scarf, so that the others were unable to follow. They saw too that, from the rapidity of the stream, the Portuguese could not possibly have crossed; they therefore resolved to ascend the stream, and the mandarin who had crossed was forced to swim back again, in doing which he escaped with the risk of his life.

[To be continued.]

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THE OCELOT.



[The Ocelot.]

THE beautiful animal which we propose to notice is a native of Chili and Mexico. The Ocelot was known to the natives of South America by the name of *tlalocelotl*, from which, by abbreviation, we have derived a cognomen less difficult to pronounce, and which at the same time does not much differ from the original designation. In size the ocelot is about three feet in length and eighteen inches in height. The legs are long; ears somewhat broad, and sometimes tipped with a few hairs. Upon a grey ground are oblong, fawn-coloured patches of a dark colour, surrounded with a border perfectly black. At the top of the back there is a continuous dark line; and the tail is beautifully spotted. The under part of the body is white with spots of fawn which extend to the feet. The skin of the male ocelot exceeds that of the tiger in beauty and variety, and in brightness and regularity of the spots it is much superior to the leopard. In this respect the panther or the ounce cannot be compared to the ocelot, so that in appearance it is more elegant than those of its tribe which inhabit the Old World. In the female the colours of the skin are comparatively dull and the spots less regular.

The ocelot, like most animals of the cat-tribe, is dis-

tinguished in its wild state by considerable ferocity, though specimens which have been brought to Europe have exhibited a subdued character. A male and female were brought to Paris in 1764 by M. Lescot, who had taken them when quite young. He states that, when they were three months old, they were not only sufficiently strong but also so ferocious as to kill a bitch under which they had been put and which had suckled them. At the same time the ocelot frequently displays great timidity. It rarely attacks man, and fears dogs, and, when pursued, seeks safety in flight, endeavouring to elude its assailants by mounting a tree.

The ocelot passes the day in its retreat, but at night it prowls about in quest of prey, and, under cover of the darkness, it approaches human habitations and enters the farm-yard. It sometimes awaits the approach of its prey concealed amid the branches of a tree, and when they are sufficiently near it springs upon them with unerring aim. It sucks the blood of the animals which it destroys, and therefore commits greater ravages than if its appetite were appeased by feeding upon the flesh of the animals it killed.

In a state of captivity it does not lose much of its natural character. M. Lescot states that he was

obliged to confine in a cage the two specimens which he brought over, and which had displayed their savage character at so early a period. He supplied them on the voyage with fresh meat, of which they ate seven or eight pounds a-day. Live cats were several times thrown in to them; but, after sucking the blood until death ensued, the ocelots refused to touch the flesh; neither would they eat meat which had been cooked. A specimen which was kept in the gardens of the Zoological Society was fed upon rabbits and birds, which form their principal food in a wild state. It was tolerably docile, and did not seize its food with the eagerness and violence which usually distinguish its tribe. The ocelot, like the jaguar, panther, leopard, tiger and lion, only produces two of its kind at a birth.

KNIGHTS OF MALTA.—No. II.

THE first military duty performed by the Knights of St. John was to escort pilgrims to and from the coast, and to guard them from the violence of the infidels during their visits to the holy places in Palestine. But by degrees the field of their action was enlarged;—they became more and more warlike,—they co-operated with the different crusaders from Europe,—and in most of the many battles by which the Holy Land was won and lost they bore a principal part. At the taking of Ascalon and Gaza in 1153 the Knights of St. John so distinguished themselves, that the pope, Anastasius IV., directly addressed the Grand Master, and, by a bull, granted new privileges to the Order and confirmed the old ones. The pontiff, however, seems to have regarded them rather in their original character of Hospitallers and charitable men than as soldiers. “As you, my brethren,” says the bull, “make so worthy a use of your goods and possessions, employing them for the maintenance of the poor and entertainment of pilgrims, we forbid all the faithful, of what dignity soever, to exact the tithe of your lands, or to publish any ecclesiastical sentence of interdict, suspension, or excommunication.” This bull secured the property of the Order, and fostered its rapid increase; at the same time it made the Knights entirely independent of all authority save that of the Pope, their own Grand Master, and the Chapter of the Order. The exemption from excommunication (a precious boon in those ages) went so far, that the Knights Hospitallers and the individuals attached to their houses and churches were exempted even when the whole of the countries they lived in were put to the ban. In nearly every country in Europe immense estates were bequeathed or given up by their possessors to the Order; and these, erected into commanderies, comprising priories, castellanies, bailiwicks, &c. were administered by resident members of the society, which was much too wise to remain with both feet in Asia, or intrust its wealth to other hands. A great source of this wealth was in the princes and nobles of the time, who, on taking the habit, resigned most of their estates, for no brother, by his vow, could possess any property independent of the Order. Thus Guy, count and sovereign of Forcalquier, in France, gave up his castle, lands, and seigniories; and, in Spain, Don Pedro Dartal, the first baron of all Aragon, surrendered a city with its dependencies. In Italy these accessions of property were immense; in the kingdom of Naples and Sicily some of the finest and most extensive of the estates belonged to the Knights of St. John, and remained to them for many centuries.

In spite of formal professions and solemn vows, riches had their usual effect on this association; they relaxed the severity of discipline, threw open all the sensual pleasures of the world, and rendered the knights luxurious and voluptuous, insolent and overbearing. The decline in the exaggerated virtues prescribed by

their vows was not, however, immediate, and their undoubted valour in the field remained long unchanged by wealth and luxury.

Vertot, Boisgelin, Giacomo Rosio, and other writers who have taken the most favourable side of the question, say, that for a long time the Hospitallers as well as the Templars only took for themselves a frugal subsistence out of their great revenues, employing all the rest in maintaining the poor, or in their wars against the Mohammedans. They represent these men, so fierce and terrible in battle, as being as meek as lambs on their return to their convents. Then, laying aside their armour, they put on their religious habit; and while some of the knights were seen attending the sick in their hospitals, or feeding the hungry pilgrims, or employed in prayer, others were cleaning their arms, or mending the harness of their horses; and all preserving a solemn silence, and looking as reserved and pensive as hermits and anchorites. An insolent expression, a loud laugh, the least murmur or complaint never passed without correction. They detested cards and dice, they delighted not in hunting, or in the making of idle visits—shows, drolleries, vain discourses and lascivious songs were their abomination. Such, according to the authors we have alluded to, who triumphantly quote a passage from St. Bernard, who described the Templars as he saw them in the middle of the twelfth century, were all the military orders during the first hundred years of their institution. That they were notably changed in manners by the end of the twelfth century during the crusade in which our king of the lion-heart distinguished himself, we have Richard's own word and plenty of confirmatory evidence. Vertot, indeed, admits that that blessed time—the golden age of the Order—did not last above a century; that the soldier insensibly got the better of the monk; and by degrees the love of glory and mundane distinctions, and the desire of amassing wealth, extinguished their piety and humility. The views of aggrandizing themselves by particular conquests of territory infected the Knights of St. John, the very base and foundation of whose Order was a vow of poverty and of disinterested assistance to all Christians who might have need of their arms or their hospitality. They even proceeded so far as to refuse to march to the defence of territories in Palestine occupied by Christians, except on condition that, after expelling the infidels, they should have half of the lands, goods, and chattels their valour had saved. Regular agreements of this kind were frequently entered into, and on one occasion to the very serious loss of the Order;—the loss, however, being in knights, whose places it was easy to fill up. Cæsarea Philippi, a city of Phœnicia, at the foot of Mount Lebanon, appertaining to the Count Humphrey de Thoron, was besieged by the Turks, and the Hospitallers, having made their bargain with the Christian lord, loaded a great number of horses and camels with arms, ammunition, and provision; and setting out from Jerusalem, a numerous escort of knights and men at arms advanced towards the besieged place. Unluckily for them, Nouredin, the commander of the Mohammedans, was forewarned by his spies of these movements, and lying in ambush for them, he completely surrounded the Hospitallers in a narrow dell not far from Cæsarea. Though pressed upon in all directions by infinitely superior forces, the Christians heroically defended themselves until nearly every knight present fell under the infidel lance or scimitar.

At the death of Baldwin III., King of Jerusalem, who was poisoned, there occurred a disputed succession, and the Christians were well nigh going to war among themselves. Some of the great feudal lords who aspired to the crown maintained that it was strictly

elective, but Amaury, the brother of the deceased monarch, claimed it by right of descent; which right, we may observe, was not well defined even in Europe until some centuries later. The horrors of civil war were this time averted, and mainly through the exertions of Auger de Balben, the Grand Master of the Hospitallers, who represented to all, that their dissensions would open the gates of Jerusalem to the Saracens or Turcomans, and end by placing the crown, refused to Amaury, on the head either of Nouredin or the Caliph of Egypt. Amaury was therefore crowned, and the barons swore fidelity to him in 1163. But the Knights of St. John were not always guided by such wise counsels; not long after they themselves endangered the safety of all Christians in the Holy Land by going to war with the red-cross knights, their rivals the Templars. In its origin the order of the Templars was a sort of branch and dependency of the Order of St. John, but this branch, according to an old historian, grew up to be a great tree, and seemed to eclipse and smother the stock whence it sprung. Although the Templars never held near half so much wealth as the Hospitallers, the Knights of St. John became excessively jealous of them, and sternly opposed them whenever they grasped at new estates or revenues. To this ill-will was added a military rivalry, and the spirit of pride, and vanity, and etiquette, with disputes about rank and precedence, embittered and filled up the cup of hatred; and at last the knights of the rival Orders hardly ever met without fighting. This division was one of the chief causes of the successes of the Mohammedans and the conquests which Saladin ultimately effected in the Holy Land.

As the military friars owned no superior except the Pope, the king of Jerusalem in 1179 applied to the then pontiff Alexander III., who brought about a reconciliation; and a formal treaty of peace, as if between two sovereign princes, was signed by the Grand Master of the Knights of St. John on the one side, and by the Grand Master of the Templars on the other. The long covenants about lands and money prove how large a share venal considerations and the love of lucre must have had in their mutual animosities. The Pope, after dwelling on the scandal created thereby in Christendom, pointed out the inevitable consequences of their hostilities, and recommended peace and union in the common cause; but the reconciliation he effected was hollow on both sides;—it was a temporary truce only which was succeeded by fresh quarrels and hostile encounters. In 1198 the king of Jerusalem was again obliged to have recourse to the Pope, when their differences were again composed for a short time. In 1240 their hatred broke out more furiously than ever, in consequence of the Templars having concluded a treaty of peace without the knowledge or consent of the Hospitallers with the sultan of Egypt. About four years after this event, the Knights of St. John sustained a terrible disaster, by which the Templars tried to profit. The Kharismian Mohammedans, who had entered Palestine and taken Jerusalem, gave the Christians a battle, which lasted two whole days and cost the life of Pierre de Villebride and of every Hospitaller engaged, with the exception of only sixteen Knights. The Templars, in order to continue the war in which the Hospitallers had so signally failed, formed Mohammedan alliances, which greatly scandalized many of the Christians. They called in the aid of the sultans of Damascus and Edessa, and fought with infidel troops against the Kharismians; but the Templars were not more fortunate than the Knights of St. John had been, and suffered tremendously. The alliances concluded, and the close intercourse maintained with unbelievers by the Templars, served as a broad ground of accusation in the following century, when the destruction of their Order was resolved upon; but it is curious to

remark that the conduct of the Knights of St. John who were allowed to survive them, and to succeed to a great part of their property, did not, in these respects, differ from that of their rivals. Both before and after the events just related, the Hospitallers, as well as the Templars, formed Mohammedan alliances, and maintained intercourse with infidels. In 1251 the Knights of St. John formed a league with the sultan of Aleppo, which led to a campaign, in which they were signally defeated, and Chateauneuf, their Grand Master, was taken prisoner.

It does not appear that the Templars were fortunate in their struggle with their rivals for wealth and lands, for at this time (in the 13th century) they had only 9000 manors in Christendom, while the Knights of St. John had 19,000. The hatred between the rival Orders became so intense, that in 1259, after many sanguinary skirmishes, they resolved to try their lances in a pitched and general engagement. The combat was more terrific than any that had been fought for many years with the Mohammedans. The Knights of St. John, who in the end were the victors, gave no quarter, and scarcely a Templar escaped to give an account of the affair to his Order. The thinned ranks of the Red Cross Knights were, however, gradually filled by the arrival of brethren from Europe, and the presence of a new common enemy, more ferocious than any they had hitherto contended with, obliged the two Orders to suspend their hostilities and co-operate for mutual preservation. In the war that ensued, though obliged to give way in all directions before an immeasurable superiority of numbers, the Knights of St. John, and those of the Red Cross, fought with all their ancient valour. Ninety Hospitallers long defended the fortress of Azotus, and when the Mamlukes of Bendocdar carried the place by assault, they walked over the dead bodies of the last of those gallant knights. Saphoury was defended by a small band of Templars who were equally brave, and also fell to a man. The conquering Mamlukes took Nazareth, Cæsarea, Tyre, Jaffa, Antioch, and other places, and carried fire and sword to the very gates of Acre, the strongest fortress and the main stay of the Christians in the East. The progress of the Mohammedans was checked for a while by the arrival of fresh crusaders from Europe, and by the valour and skill of Prince Edward of England (afterwards Edward I.), who, after obtaining several victories over them, concluded a treaty in 1272, which secured to the Christians a ten years' peace. But in 1287, the cloud of war again burst upon the few places that remained in possession of the Europeans, and by 1291, the Sultan of Egypt was enabled to lay siege to Acre, the last of their strongholds, which, however, did not fall until the military Orders of Knights were nearly exterminated, and many thousands of the Mamlukes had bitten the dust. At the moment of crisis, while the Mohammedans were rushing to the breaches, the Knights of St. John, headed by their Grand Master, secretly left the city, and stealing to the enemy's rear, rushed into his camp. The Sultan, however, was not taken by surprise; a host of Mamlukes met the devoted band, who at that instant received the discouraging news that the Grand Master of the Templars had fallen, together with nearly all his Knights, and that Acre was in possession of the infidels. They then turned their steps towards the sea, fighting all the way, and on the shore they found a small boat into which they threw themselves. A large vessel was not requisite—only seven knights remained alive. This sad remnant of a numerous body fled for refuge to Cyprus, which island was in the hands of a Christian prince, and though a handful of Templars for a short time renewed the hopeless struggle, the Holy Land was lost with the fall of Acre and the departure of the Hospitallers. Soon after their arrival at Limisso, in Cyprus,

the Grand Master sent to Europe to summon a general chapter of the Order, and the absent Knights of St. John, wherever they were scattered, hastily attended to the call and embarked for the East. But the crusading mania had worn itself out—the Knights were not seconded by troops and money from Europe,—an attack on Palestine was therefore out of the question, and after

ten more years had been spent, the greatest conquest the Hospitallers could aspire to, was the island of Rhodes. They gained possession of that island in 1310, and kept it until 1522, when it was lost after a memorable siege. During their long sovereignty there, they generally went by the name of the Knights of Rhodes, as they have since been called the Knights of Malta.

THE PILGRIMAGES OF THE MIDDLE AGES.



[Scallop Shell of the Pilgrims.]

THE life of man is frequently termed a pilgrimage; but in the sense in which the word is usually employed, it is applied to a journey undertaken for devotional purposes, or to gratify the interest which remarkable events have excited by a visit to the spot in which they took place. The birth-place or tomb of the truly illustrious are equally calculated to stir up emotions of deeper interest than those to which the mind is capable of rising when it is not operated upon by the recollection that here the men themselves acted their part in the scene of life, or there their ashes are deposited. Dr. Johnson, who visited Icolmkill, one of the western islands of Scotland, which, in remote ages, was, as he says, the "luminary of the Caledonian regions," thus speaks of the nature of those emotions to which we have alluded:—"To abstract the mind," he says, "from all local emotions would be impossible, if it were endeavoured, and would be foolish if it were possible. Whatever draws us from the power of our senses,—whatever makes the past, the distant, or the future, predominate over the present, advances us in the dignity of thinking beings. That man is little to be envied whose patriotism would not gain force upon the plain

of Marathon, or whose piety would not grow warmer among the ruins of Iona."

The places to which the Christian pilgrims of the middle ages chiefly resorted were Rome, Loretto, Jerusalem, Compostella in Spain, and the local shrines with which every part of Christendom abounded. Two pilgrimages to a neighbouring shrine were equivalent to one visit to another at double the distance. Those who were unable to make long journeys gave money to assist the poorer pilgrims on their way. A dream or vision was frequently the preliminary of a pilgrimage; and the belief was general, that if certain pilgrimages were not made during life they must be performed after death. Southey remarks, in one of his minor poems,—

"Some went for payment of a vow
In time of trouble made;
And some who found that pilgrimage
Was a pleasant sort of trade."

All classes—from the king to the peasant—from the archbishop to the humblest clerk—bent beneath the custom of the times.

The Holy Land was resorted to by pilgrims as early as the fourth century. The passage to Asia by land

was subsequently closed in consequence of the hostility of the Hungarians, and Rome and Loretto then attracted the greatest number of pilgrims. In the eighth century the Anglo-Saxons made frequent pilgrimages to Rome; and at an earlier period than this, Cadwalader, King of Wales, founded a hospital at Rome for Welsh pilgrims. The great jubilees of the church drew to Rome large numbers both of sinners and devotees, for at these festivals plenary indulgences were granted for the remission of all sins. Indulgences of a less extensive nature were granted at all periods to those who made a pilgrimage to the holy relic called the Veronique, or Vernicle.

The church of Loretto was in high repute during the middle ages as an efficacious resort for pilgrims; and at particular seasons there were frequently not fewer than 200,000 visiting it at once. They formed processions round the "Palace of our Lady," as it was called; and some went round it on their knees five, nine, or a dozen times, according to the importance with which they were pleased to invest any particular number.

In the fifteenth century the pilgrimage to St. James, or Santiago of Compostella, the patron-saint of Spain, was quite a passion among all classes, and the local shrines were comparatively forsaken. Charlemagne had caused the place to be made the seat of a bishopric; and afterwards, through the influence of Ferdinand and Isabella, who founded a hospital there for pilgrims, it was erected into an archbishopric. The number of English pilgrims who visited Compostella in the fifteenth century was very great. In Rymer's 'Fœdera' a list is given of those who obtained the king's licence for their going, and it is probable that many others went without such sanction; but of the former class only, there left the kingdom in January, 1434, about 90 pilgrims; February, 850; March, 80; April, 900; May, 750; June, 160; July, 50: and in the following year there departed for the same destination, in January, 200; February, 130; March, 860; April, 618; May, 192; June, 850; and July, 50. In 1449 the Lord Privy Seal obtained a licence to undertake the pilgrimage and vows for the salvation of his soul, and to carry 500 marks with him.

The pilgrimage to Palestine, the scene of sacred history, had the most important influence on the religious spirit of the middle ages, and was sanctioned by the most rational motives. In the present day the Holy Land may properly be regarded as one of the most interesting portions of the globe which a traveller can visit, while the glories of Compostella and Loretto have long since departed. Jerusalem had been visited from an early period of Christianity by devout Christians. The anticipated termination of the world with the arrival of the thousandth year of the present æra, strongly directed men's minds to religious subjects. A natural impulse of gratitude, when it was found that after this dreaded period the world went on as before, led men to visit the scenes distinguished in the history of the Saviour. The conversion of the Hungarians from paganism to Christianity—an event which was hailed with rapture by all Christendom—contributed to increase the religious excitement which was prevalent. Sharon Turner, in his 'History of England during the Middle Ages,' says that in the eleventh century the inferior orders, on whom natural feelings always first operate, began the peregrination. Their return and conversation excited the middle ranks to imitate them; and at last nobles, ladies, and kings imbibed the passion, and traversed Europe and Asia to Jerusalem. The pilgrims were received by the patriarch, and with a solemn procession were led amid the thunder of cymbals and immense splendour of lights to the church of the Holy Sepulchre. Jerusalem was at this period in the possession of the Mohammedans, who

often maltreated the pilgrims with impunity, and refused them permission to enter the city without the payment of a tribute. Wasted as they were with the hardships of so long a journey, when the means of travelling were very imperfect, their resources exhausted by the tolls which they had paid in crossing bridges and entering towns, and by the cost of providing themselves with necessaries on the road, their condition was frequently deplorable in the extreme. William of Tyre says that there was scarcely one out of a thousand who reached Jerusalem who could support himself. Towards the close of the eleventh century, Peter the Hermit made the pilgrimage to Palestine, and was so deeply touched by the sufferings of the pilgrims, and indignant at the conduct of the infidels who held possession of the city, that on his return he roused all Europe to that great movement of the middle ages, called the Crusades or the Holy War, which to a great extent partook of the nature of a pilgrimage.

The above-mentioned places were the principal resorts of pilgrims from the various countries of Europe. There were in England, however, and also in the rest of Europe, local shrines which were visited under a great variety of circumstances. Strutt says that it seems to have been almost as fashionable in the days of Chaucer to visit the tomb of some favourite saint, as it now is to frequent the different watering-places; and the Rev. T. D. Fosbroke, in noticing the custom in his work on 'British Monachism,' mentions some of the circumstances which occasioned the practice to be so common. Shrines were visited before making a voyage to ensure the prayers of the saint for safety. To some shrines annual pilgrimages were made; and others were only resorted to as events occurred or were anticipated, which rendered it of interest to the parties concerned to visit them. In an old English writer, quoted by Sharon Turner, the Duke of Norfolk is mentioned as going in pilgrimage on foot from his castle at Framlingham to Walsingham, where there was a shrine of the Virgin, which was much frequented in the fifteenth century. Chaucer has rendered the pilgrimage to the shrine of Thomas à Becket at Canterbury familiar to everybody. In the prologue to his 'Canterbury Tales,' he says,—

"Befelle, that in that season on a day
In Southwark, at the Tabord as I lay,
Redy to wenden on my pilgrimage
To Canterbury with devout courage,
At night was come into that hostellerie
Wel nine-and-twentie in a compaignie.
Of sondry folk by aventure yfalle
In fellowship, and pilgrymes were they alle
That toward Canterbury wolden ride."

A visit to the shrine of Becket was considered of universal efficacy. His skull encased in silver was shown to the pilgrims, and the blade of the weapon with which he was killed, and other relics. The shrine was extremely rich in offerings, which were exhibited through a strong grating by a prior with a white wand.

We are chiefly indebted to the Rev. Mr. Fosbroke's work for the subsequent information relative to the costume of pilgrims. He states that they were peculiarly designated by the scrip, the staff or bourdon, palmer's staff, scarf, sclavina, hat, rosary, and scrobula.

The scrip was derived from the Egyptian monks, and was usually a leathern pouch or wallet, attached to the scarf, and used for containing provisions and other necessaries. Thus Chaucer says,—

"In scrippe he bore both bread and leeks."

Charlemagne wore a golden scrip when he made the pilgrimage to Rome. The term scrip was sometimes applied to the whole of the articles which a pilgrim carried along with him. A sack instead of a scrip is mentioned as being carried by a poor female pilgrim. The scarf was simply a leathern throng or belt.

A bourdon was a long staff with a knob in the middle, and without a cross at the top, though in theatrical representations one is erroneously affixed. This staff was sometimes excavated into a rude piece of music, the sound from which was an accompaniment to the singing with which pilgrims beguiled the tedium of their journey. In Germany, walking-sticks are made which serve as tubes for pipes, with a compressing pump at one end to obtain fire, or fitted up as telescopes. A walking-stick may be used for such a variety of purposes, that we may easily believe, though it is not quite satisfactorily proved, that the bourdon staff of the pilgrim was formed into a musical instrument. Southey has alluded to the fact in the following lines :

“And the staff was holed and bored for those
Who on a flute could play,
And thus the merry pilgrim had
His music on the way.”

From a dialogue between a disciple of Wicliffe, and Arundel, Archbishop of Canterbury in the reign of Henry IV., it would appear that the pilgrims were sometimes accompanied by less simple music than that of a hollowed staff. The Archbishop defends the practice against some insinuations, and states that “pilgrims have with them both singers and also pipers, that when one of them goeth barefoot and striketh his foot against a stone, and maketh him to bleed, it is well done that he or his fellow begin then a song, or else take out of his bosom a bagpipe for to drive away with such mirth the hurt of his fellow : for with such solace the travail and weariness of pilgrims is lightly and merrily brought forth.” The palmer’s staff was made of palm and was borne by those who returned from Palestine. We may here state the difference which, according to Mr. Fosbroke, distinguished the palmer from the pilgrim. A pilgrim had a fixed residence, a palmer had none ; a pilgrim went to a fixed place, a palmer to none in particular ; a pilgrim went at his own expense, a palmer professed voluntary poverty, and frequently ended life as a hermit.

The *sclavina* was a long coarse robe. The *scrobula* was the robe worn by female pilgrims, and, with the exception of closer sleeves, similar to the *sclavina*. The rosary was a string of beads which the pilgrim ran over as he repeated his prayers. The hat was broad brimmed, turned up in front, and something like the hats often worn by infants. Sometimes the pilgrim’s hat was slung at his back, and a substitute for shooting off the wet was used to supply its place.

The pilgrim from Rome, from Jerusalem, or Compostella, was distinguished by variations of costume peculiar to each pilgrimage. The Jerusalem pilgrims wore the signs of Sinai, which were relics brought from thence. Those who had made a pilgrimage to Rome wore a cloak marked with cross-keys and the veronique or vernicle. The scallop-shells which the pilgrims wore in the front of their hats was, properly speaking, peculiar to the Compostella pilgrimage. Fuller therefore is not correct in assigning the use of this shell to pilgrims generally, on the ground that “it was oft cup and dish to them in Palestine.” Southey’s notes to the ‘Pilgrims to Compostella’ contain an old monkish legend which gives the origin of scallop-shells being worn by the pilgrims to the shrine of the Spanish saint. Popes Alexander III., Gregory IX., and Clement X. granted a faculty to the Archbishop of Compostella that they might excommunicate those who sold these shells anywhere except in the city of Santiago, and in these documents the reason assigned is, that the scallop-shell is the badge of the Apostle Santiago. In the church of St. Clement at Rome there is a picture of Santiago, apparently more than 500 years old, which is decorated with scallop-shells. The scallop-shell in a coat-of-arms shows that some of the bearer’s line have

visited the shrine of St. James. The cut represents one of these shells, on which St. Joseph, with a staff of palm in his hand, and carrying the infant Jesus, has been worked in bas-relief.

Before setting out on a pilgrimage, confession of sins was made, which being concluded, the future pilgrim prostrated himself before the altar. Certain prayers were then said, after which the scrip and staff were solemnly consecrated ; and the pilgrim was clothed in his appropriate costume. In the form of prayers in use before the Reformation, the people were bid to pray “for all true pilgrims and palmers that have taken their way to Rome, to Jerusalem, &c.” Mr. Fosbroke says that in Normandy a pilgrim who had received the sanction and blessing of the church was led out of the parish in procession, accompanied by the cross and holy water ; and on the return from pilgrimage it was in most countries the custom to go to the church to thank God for their happy success ; and in proof of the fulfilment of their vows to proffer palms or branches of that tree to the priest who placed them on the altar. These ceremonies would naturally fall into desuetude when the habit of undertaking pilgrimages became more general.

Pilgrimages to the Holy Land, as a general fashion, ceased with us, according to Mr. Fosbroke, about the time of Henry V. The growing activity of commerce supplied a new motive for visiting foreign lands. But pilgrimages had not been without their use in the advancement of civilization.

St. Jerome noticed that pilgrims conveyed news. “In one summer (he says) Britain has learned what the Egyptian and Parthian has known in the spring.” It is believed that the drama was first introduced into France from Italy by pilgrims. Mr. Fosbroke says,—“Pilgrimage was a kind of apprenticeship, served in various places, in order to acquire a stock of novel ecclesiastical customs and knowledge.” At a time when commerce employed but a few individuals, there would have been no inducement to visit other countries if men had not been actuated by the religious spirit. But this operated upon the mass of the people, and sent them to gather the various lessons of civilization and improvement which each country respectively furnished.

The standard by which the state of one country may be compared with that of another was rendered more enlarged and varied by the habit of visiting distant shrines ; and a comparatively rude people were enabled to obtain, by this means, some of the benefits of a superior civilization. Sharon Turner remarks, that “the habit of pilgrimage, and afterwards of the crusades, increased the taste for study. It was impossible for so many, from all ranks and nations in Europe, to visit the Grecian and Arab states without some conviction of the benefit of superior knowledge. From the account left by Luitprand of the wonders he saw at Constantinople, and of the horse-laugh with which his astonishment was received by the conceited courtiers, it would seem that the saucy Greeks amused themselves with making the western barbarians stare. The specimens of their mechanical skill to which he alludes may have first interested a rude stranger’s notice ; but their tasteful architecture,—their elegant sculptures,—their fine manuscripts,—their celebrated loquacity,—and the fame of the poets and philosophers who once adorned their name, must have powerfully impressed the attention of many, and have created that feeling of deficiency and that desire of emulation which are the certain parents of improvement.” He adds, that a visible improvement took place in England after these pilgrimages had become common, increasing as the crusades increased the intercourse with Constantinople and the East. Schools were established, and architecture and the arts advanced.

SIAMESE NARRATION OF A SHIPWRECK ON
THE SOUTH COAST OF AFRICA.

[Concluded from No. 263.]

For three or four days they continued to ascend the bank of the river, suffering dreadfully from cold and hunger, and heartily regretting the rock of muscles they had left behind them. They had soon evidences that they were in the track of the Portuguese. Once they found a torn stocking, and on another occasion a fusil, the lock of which they took off to serve as a tinder-box. The next proof was a very melancholy one; it was the body of one of their interpreters, a half-caste who had followed the Portuguese in their progress; they found him with his knees on the ground, and his body huddled up in a heap all together and quite stiff. They were themselves now almost dead with hunger; they had found absolutely nothing eatable, and were reduced to devour their shoes, which were probably made of undressed skin; they had for some time deliberated on returning to the rock, and were at last determined to do so on arriving at a point where they could see no means of getting on, but either climbing over a mountain, which they thought inaccessible, or wading through a deep and dangerous marsh. Here they passed the night, and the next morning they began to retrace their steps, resolving to remain by the rock until all the muscles were eaten, and then to give themselves up as slaves to the Hottentots.

They put their resolution in practice with so much eagerness that in three days they returned to the land of abundance, as it appeared to them; but now they found a new enemy in the increasing cold, which affected them to such a degree that, after remaining six days, and burning up all the fuel within their reach, they set out to find the Hottentots, carrying with them all the muscles they could find. Early the next morning they were found by three Hottentots, who were much more civilized than those they had before communicated with, and who were evidently acquainted with Europeans. They were, in fact, servants of the Dutch Government at the Cape, and appeared to be in search of them.

The Siamese party consisted of fifteen persons, and seven of those now found themselves completely exhausted. It was therefore resolved that they should be left in the best spot they could find, with as many of the muscles as they could spare, and that the others should follow the Hottentots, who appeared willing to act as guides, until they arrived at the first settlement, when they would send conveyances for those left behind. This was done: the eight who could walk followed their guides, but so slowly that two of the Hottentots left them. They followed the remaining guide through dreadful roads, and along precipices which made them shudder. On one occasion their nimble guide conducted them to a place so difficult to get along, that some of the party imagined they were brought there for no other purpose but to be killed; they actually came to a resolution to knock their guide upon the head, and would have put their unreasonable design into execution, had not the second ambassador commanded them to desist.

They lived all this time on their muscles, and on what they picked up on their road. Sometimes they met with a few locusts, and, what they found much more agreeable, some frogs. But the narrator seems to have been most pleased with a sort of beetle. "I have no difficulty in saying," he observes; "that the insect which appeared most agreeable to my taste, was a sort of large fly or beetle, of very dark colour, of which we found many on our road. All the dressing we applied to them before eating, was merely to broil them on the fire, and we found them excellent."

At length, on the thirty-first day of their march, and the sixth from their finding a guide, they met two Dutchmen, accompanied by the Hottentot guides, who had left them six days before, loaded with provisions. "When we saw that they had brought us fresh bread, dressed meat, and wine, we could not contain our gratitude. Some of us threw ourselves at their feet, and embraced their knees, others named them fathers and deliverers." The narrator gave each of the Dutchmen a large diamond set in a gold ring, which had been presents from the king of Siam to the first ambassador.

Their chief difficulties were now terminated. They procured carriages to send for the companions they left behind them; and in a few days more were all carried safely to the Cape of Good Hope, where they were received in a most friendly manner, and where they found the Portuguese, who had arrived eight days before, but in a much more miserable plight than themselves, having lost between fifty and sixty of their party from fatigue and hunger, who dropped one after another, racked with horrid pains, and groaning at the same time from their sufferings, and with the prospect of their friends leaving them to perish miserably. "All that we could do," said one of the monks to the narrator, "not to appear cruel and barbarous when we saw any of our body drop, which at last happened several times a day, was to exhort him to recommend his soul to God. Without another word we turned our eyes away, and stopped our ears to avoid the lamentable cries which so often reached us."

The most melancholy incident of the whole narrative is the death of the son of the captain of the vessel, a fine youth of ten or twelve years, whom the father had taken with him on his voyage. "His father had carefully carried him to the shore when the vessel struck, and during the journey he made his slaves carry him. But all the negroes dying on the road, the poor child became so weak and swollen three days after the Portuguese left us, that he threw himself down upon a rock from which he could not rise again; he lay there extended, with his limbs so stiffened that he could not even bend them. This sight was a death blow to his father, who raised him and assisted him to walk for some time, but he could no longer help himself. He could only be carried, and those whom his father had begged to render this service to his son, told the captain plainly that they could not do it without perishing themselves with him. The poor man then tried his own powers; he put his boy upon his shoulders, but he was unable to advance a single step, and he fell down with the youth, who seemed more touched with his father's grief than his own sufferings. He begged him to leave him to die, and urged that, although they might carry him on a little further, he could not possibly survive the night; that the affliction of his father, and the tears which he saw him shed, were more painful to him than his own sufferings. The captain was still more affected by his son's words than before, and he resolved to stay and die by his side. The poor boy then addressed the other Portuguese, and earnestly begged them to remove his father, saying that his presence was a cruel addition to his sufferings, and that the sight of him would but hasten his death.

"The representations made to the captain of the sinfulness of the real self-murder of which he would be guilty by remaining there, were all in vain; at length he was led off by main force, and compelled to accompany the rest of the party. The separation was so grievous and afflicting for the unfortunate man, that he never recovered the stroke: his grief was so violent that he died a day after he reached the Cape."

ATTRACTIONS AND ADVANTAGES OF KNOWLEDGE.

(From Dr. Conolly's Lecture at the Leicester Mechanics' Institute.)

IN every object, it appears to me, some lesson is held out to us; and who shall say we ought not to read the lesson. In the absence of more varied plants, the common quickset, now putting forth its little scarlet points, the future bud, guarded by sharp spears like a polished sword, may worthily occupy our attention. No condition is so humble as to shut our eyes to the beauty of the white thorn through many months of the year;—its first delicate greenness in the spring;—then its thick covering of white flowers, like the purest snow;—then its fuller foliage, and welcome shade;—then, in the autumn, its farewell hue of pink. No working-man, walking out to breathe the fresh air after his labour, will be a worse man, or a worse workman, for admiring the green and gold and silver of the meadows, or the perfume of the bean; and if he knows the character of the flowers which make up those lovely colours, or afford that agreeable perfume, I have no doubt he will be a happier man, and I think the chances are that he will be a better. Vicious excitements will be less necessary to him, and he will be very frequently thinking of things the very beauty of which will lead his thoughts to that unknown world of beauty of which these present, as it were, a faint image and a promise. When the celebrated but unfortunate Mungo Park was once in a desert, far from his friends, uncertain in what direction to proceed, faint with hunger, weary with fatigue, and almost without hope, it chanced that his eye rested on a piece of common moss; and this simple accident perhaps saved his life at that time: for surely, he said to himself, seeing how beautifully that ordinary moss was formed which no man regarded, he who created this with so much care will not abandon me, who have an immortal soul. And with these thoughts he resumed his exertions, and eventually reached a place of safety. * * * *

For those who ask us what actual benefits accrue to men from knowledge, an answer is written in language that cannot err, in the whole history of the world. Cast your eyes back to the savage state, and behold man supporting existence with difficulty, the prey of beasts, the sport of the elements, and defenceless. See him by degrees improving the earth by culture; improving that culture itself by instruments of metal drawn from the earth; and mark how the beasts of the desert disappear before his industry, and even the worst diseases of the marsh and of the poisoned air become less common and less destructive. Man is seen to be better fed, better lodged, better clothed. If he still devotes himself to war, it may be for the defence of his possessions, or that his knowledge is yet imperfect, and neither he nor his neighbours have yet learned the true end of living. His luxuries, and all their evils, spring in part from the same cause; gorgeous triumphs follow conquest; indolence and rest follow exertion. But flourishing communities and states are formed; laws are agreed upon, often partial and imperfect; arts and sciences slowly advance; ignorance gradually disappears, and the laws gradually improve. More and more man's intellect becomes cultivated, and political rights become more and more generally and equally imparted to all classes, to which more and more comforts have gradually become familiar. This seems to be the point in which we may now survey the most advanced communities. Day by day their political rights are enlarging; if their knowledge stops short, these rights will be but instruments of mischief; with knowledge they will be the means of assuring every blessing. Firmly persuaded of these truths, I rejoice to perceive that they are becoming generally admitted; that their conviction is forcing its way into the minds

of thinking men of whatever sect. In almost every periodical publication of the present day, whatever may be its political banner, we may see just views of society advocated, and truth more and more prevailing; the dawn, in fact, of a serener day. The clergy, who have always been the chief instructors of the people, but who have often seemed to doubt the propriety of diffusing instruction beyond the limits of the aristocracy of nations, are now heard, from every pulpit, to acknowledge its advantages, and to repudiate the false and wicked assertion that the cultivation of the mind is inseparably associated with crime. All seem now to admit that it is not the being able to read, but what is read that is or may be detrimental or useful.

THE COW-MARTINGALE OF NORMANDY.

NORMANDY is, with regard to the production of cider, the Herefordshire of France; and so highly is the Norman cider esteemed, that there is not a *cabaret* (public-house), however poor and miserable, throughout Picardy, where cider is also made in large quantities, that has not "Bon Cidre de Normandie" painted in some conspicuous situation on the outside of the house,—most frequently on the shutters.

The vast corn-plains which cover the greater part of Normandy are studded with apple-trees, growing generally in rows, or small clusters, but occasionally forming extensive orchards; each tree, however, planted at such a distance from the others, as to allow of the cultivation of some kind of grain beneath them. The main roads are also frequently ornamented with rows on either side for miles together; and care is taken, every year, to replace such of the trees as are decayed, or past bearing.

As hedges, or fences of any description, are by no means common in many parts of Normandy, the apple-trees, more especially the young ones, would be exposed to considerable injury from the cows, which, at certain seasons of the year, are turned out to pick up a little herbage wherever it is to be found, were it not for a simple sort of cord-martingale, which is thus arranged:—The extremity of the halter that fastens the cow to her crib when in the stable, is, when she is turned out, passed between the fore-legs, and attached to a cord which encircles the body of the cow, the latter cord being kept in its place by another, put on like the breeching of a horse. By a reference to the wood-cut this description will easily be understood.

Thus, by this very simple contrivance, which costs but a few pence, the cow is effectually prevented from raising her head to nibble or break the lower branches of the apple-trees, and at the same time suffers no inconvenience when grazing.



[The "Cow-Martingale."]

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OF THE

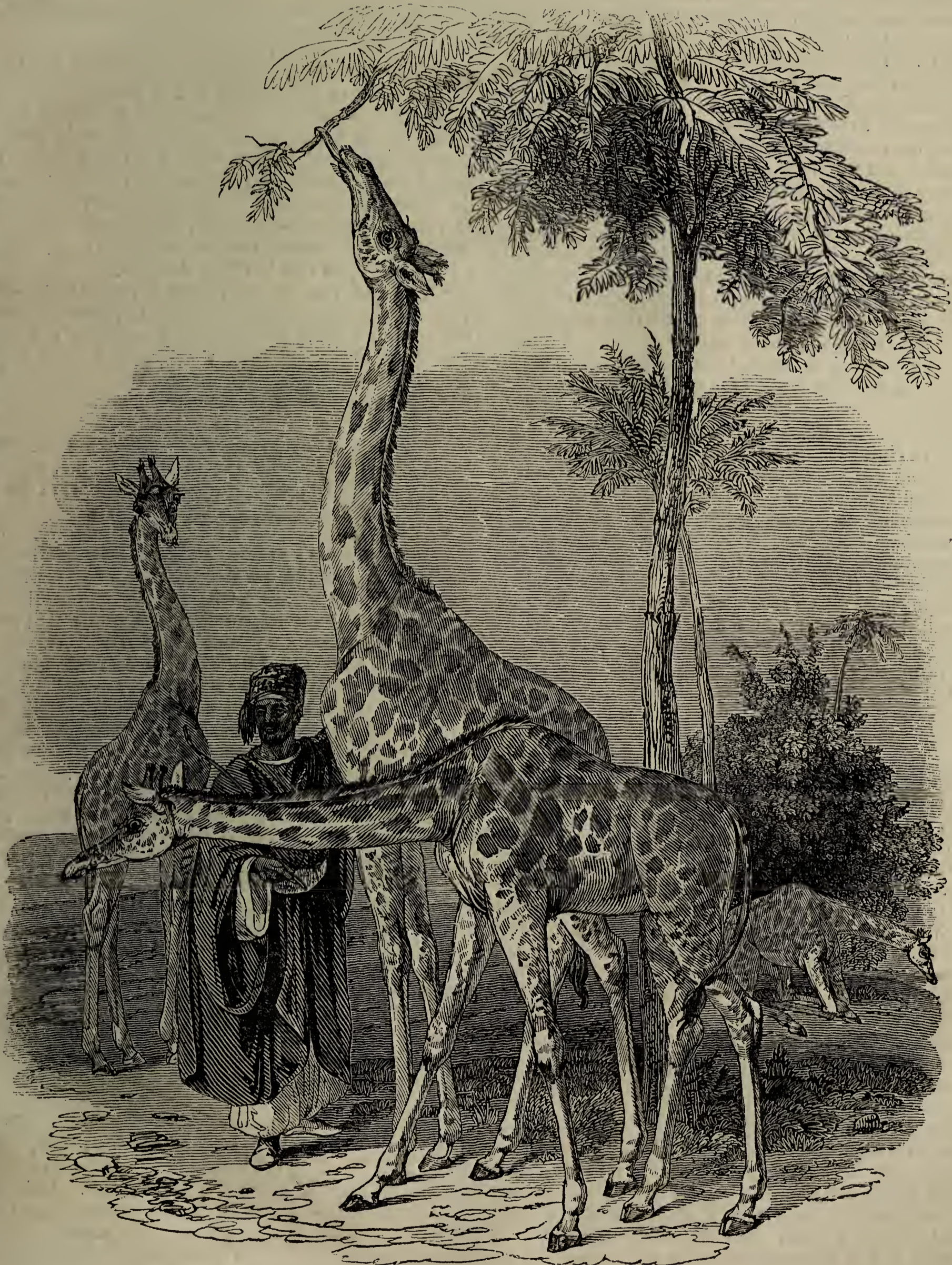
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[JUNE 18, 1836.]

THE GIRAFFES AT THE ZOOLOGICAL GARDENS.



[Giraffes in the Zoological Gardens, with one of the Keepers.]

THE arrival of four giraffes together in Europe forms an era in the annals of natural history. The honour is due to the Zoological Society of London, in whose archives the record of this event will bear testimony to well-directed zeal in the promotion of scientific knowledge. Nor can we refuse our meed of praise to the individual through whose exertions these rare and extraordinary animals were captured in a distant region of the globe, transported over deserts and arid sands, and, lastly, across the sea in health and safety to our northern shores. The letter of M. Thibaut to the secretary of the Society, which we transcribe from its 'Scientific Proceedings,' will be read with great interest, and the more so as it communicates much valuable information respecting the habits of these animals in their native country. The letter is dated January 2, 1836:—

"Having learned, on my arrival at Malta, that you were desirous of information on the subject of the four giraffes which the Society has entrusted to my care, I regard it as a duty to transmit to you a short statement, by which you will become aware of the difficulties that I encountered in obtaining and preserving for the Society these interesting animals, which are now, I hope, altogether out of danger.

"Instructed by Colonel Campbell, his majesty's consul-general in the Levant, and desirous of rendering available for the purposes of the Zoological Society the knowledge which I had acquired by twelve years' experience in travelling in the interior of Africa, I quitted Cairo on the 15th of April, 1834. After sailing up the Nile as far as Wadi Halfa (the second cataract), I took camels, and proceeded to Debbat, a province of Dongolah, whence, on the 14th of July, I started for the desert of Kordofan.

"Being perfectly acquainted with the locality, and on friendly terms with the Arabs of the country, I attached them to me still more by the desire of profit. All were desirous of accompanying me in my pursuit of the giraffes, which, up to that time, they had hunted solely for the sake of the flesh, which they eat, and of the skin, from which they make bucklers and sandals. I availed myself of the emulation which prevailed among the Arabs, and as the season was far advanced and favourable, I proceeded immediately to the south-west of Kordofan.

"It was on the 15th of August that I saw the first two giraffes. A rapid chase, on horses accustomed to the fatigues of the desert, put us in possession, at the end of three hours, of the largest of the two: the mother of one of those now in my charge. Unable to take her alive, the Arabs killed her with blows of the sabre, and cutting her to pieces, carried the meat to the headquarters which we had established in a wooded situation: an arrangement necessary for our own comforts, and to secure pasturage for the camels of both sexes which we had brought with us in aid of the object of our chase. We deferred until the morrow the pursuit of the young giraffe, which my companions assured me they would have no difficulty in again discovering. The Arabs are very fond of the flesh of this animal. I partook of their repast. The live embers were quickly covered with slices of the meat, which I found to be excellent eating.

"On the following day, the 16th of August, the Arabs started at daybreak in search of the young one, of which we had lost sight not far from our camp. The sandy nature of the soil of the desert is well adapted to afford indications to a hunter, and in a very short time we were on the track of the animal which was the object of our pursuit. We followed the traces with rapidity and in silence, cautious to avoid alarming the creature while it was yet at a distance from us. Unwearied myself, and anxious to act in the same manner as the Arabs, I followed them impatiently, and at nine

o'clock in the morning I had the happiness to find myself in possession of the giraffe. A premium was given to the hunter whose horse had first come up with the animal, and this reward is the more merited as the laborious chase is pursued in the midst of brambles and of thorny trees.

"Possessed of this giraffe, it was necessary to rest for three or four days, in order to render it sufficiently tame. During this period an Arab constantly holds it at the end of a long cord. By degrees it becomes accustomed to the presence of man, and takes a little nourishment. To furnish milk for it, I had brought with me female camels. It became gradually reconciled to its condition, and was soon willing to follow, in short stages, the route of our caravan.

"This first giraffe, captured at four days' journey to the south-west of Kordofan, will enable us to form some judgment as to its probable age at present; as I have observed its growth and its mode of life. When it first came into my hands, it was necessary to insert a finger into its mouth, in order to deceive it into a belief that the nipple of its dam was there: then it sucked freely. According to the opinion of the Arabs, and to the length of time that I have had it, this first giraffe cannot, at the utmost, be more than nineteen months old. Since I have had it, its size has fully doubled.

"The first run of the giraffe is exceedingly rapid. The swiftest horse, if unaccustomed to the desert, could not come up with it unless with extreme difficulty. The Arabs accustom their coursers to hunger and to fatigue; milk generally serves them for food, and gives them power to continue their exertions during a very long run. If the giraffe reaches a mountain, it passes the heights with rapidity: its feet, which are like those of a goat, endow it with the dexterity of that animal; it bounds over ravines with incredible power; horses cannot, in such situations, compete with it.

"The giraffe is fond of a wooded country. The leaves of trees are its principal food. Its conformation allows of its reaching their tops. The one of which I have previously spoken as having been killed by the Arabs, measured twenty-one French feet in height from the ears to the hoofs. Green herbs are also very agreeable to this animal, but its structure does not admit of its feeding on them in the same manner as our domestic animals, such as the ox and the horse. It is obliged to straddle widely; its two fore-feet are gradually stretched widely apart from each other, and its neck being then bent into a semicircular form, the animal is thus enabled to collect the grass. But on the instant that any noise interrupts its repast, the animal raises itself with rapidity, and has recourse to immediate flight.

"The giraffe eats with great delicacy, and takes its food leaf by leaf, collecting them from the trees by means of its long tongue. It rejects the thorns, and in this respect differs from the camel. As the grass on which it is now fed is cut for it, it takes the upper part only, and chews it until it perceives that the stem is too coarse for it. Great care is required for its preservation, and especially great cleanliness.

"It is extremely fond of society, and is very sensible. I have observed one of them shed tears when it no longer saw its companions, or the persons who were in the habit of attending to it.

"I was so fortunate as to collect five individuals at Kordofan; but the cold weather of December, 1834, killed four of them in the desert on the route to Dongolah, my point of departure for Bebbah. Only one was preserved; this was the first specimen that I obtained, and the one of which I have already spoken. After twenty-two days in the desert, I reached Dongolah on the 6th of January, 1835.

"Unwilling to return to Cairo without being really useful to the Society, and being actually at Dongolah,

I determined on resuming the pursuit of giraffes. I remained for three months in the desert, crossing it in all directions. Arabs in whom I could confide accompanied me, and our course was through districts destitute of everything. We had to dread the Arabs of Darfour, of which country I saw the first mountain. We were successful in our researches. I obtained three giraffes, smaller than the one I already possessed. Experience suggested to me the means of preserving them.

"Another trial was reserved for me:—that of transporting the animals, by bark, from Wadi Halfa to Cairo, Alexandria, and Malta. Providence has enabled me to surmount all difficulties. The most that they suffered was at sea, during their passage, which lasted twenty-four days, with the weather very tempestuous.

"I arrived at Malta on the 21st of November. We were there detained in quarantine for twenty-five days, after which, through the kind care of Mr. Bouchier, these valuable animals were placed in a good situation, where nothing is wanting for their comfort. With the view of preparing them for the temperature of the country to which they will eventually be removed, I have not thought it advisable that they should be clothed. During the last week the cold has been much greater than they have hitherto experienced; but they have, thanks to the kindness of Mr. Bouchier, everything that can be desired.

"These four giraffes, three males and one female, are so interesting and so beautiful, that I shall exert myself to the utmost to be of use to them. It is possible that they may breed; already I observe in them some tendency towards mutual attachment. They are capable of walking for six hours a day without the slightest fatigue.—G. T."

To convey these beautiful animals from Malta to London, the Society made arrangements with the proprietors of the Manchester steam-vessel, engaged at that time in the service of the Prince of Portugal, to proceed, after her discharge at Lisbon, to Malta, and there take them on board, proper accommodations having been fitted up for them. By this vessel they arrived in London on the 23rd of May, and were placed in a temporary place of security, whence in the early part of the morning of the 25th, at about three o'clock, they set out to walk to their final destination, the gardens in Regent's Park. Accompanied by M. Thibaut, and several Nubian attendants, they proceeded quietly along, led by halters, without evincing the least show of resistance or alarm; indeed their gentleness and docility were beyond expectation. Few persons at that early hour were abroad, but those who met them on the road gazed with wonder on the novel spectacle—four tall strange animals moving along, or every now and then stopping to gaze around them, stretching out their long necks to their full extent, led by Nubian keepers, dressed in their Abyssinian costume, together with a mingled retinue of attendants, the whole forming a singular and striking cavalcade. Arrived at the gardens they entered their dwelling without the slightest difficulty; nor did the novelty of their situation, or the presence of strangers, in the least disturb them. It must not be supposed that the gentleness thus manifested arose from weakness or fatigue; on the contrary, they were in excellent health and condition, with their spotted coats smooth and glossy, and as playful as fawns, animation sparkling in their large dark eyes, and every action evincing ease and activity. Their walk is quick, and they get over the ground well, but there is something apparently awkward in their pace, owing to the shortness of the body, and to the circumstance of the hind feet passing the fore feet by two hands' breadth at every step, and that a little to the outside, while the neck is carried obliquely, the line of direction running from the haunches to the withers,

and thence forwards to the head, without any angle. This fact we first noticed in the giraffe at Paris, and it has not been faithfully given in any drawing of the animal we have yet seen. In this attitude the neck does not appear graceful, but it is far otherwise when the animal elevates its head to gaze around it, or to take its food; it is then beautifully swan-like. The difficulty which the giraffe experiences in putting its mouth to the ground, we saw singularly exemplified in the endeavours of these individuals to take a lump of sugar from the hands of the Nubian attendants placed upon the floor, which indeed after many awkward attempts they failed to accomplish. Of sugar we may here observe that they are very fond, and will follow their attendants up and down their apartment when shown a portion of this tempting sweetmeat, trying to gain the possession of it by insinuating their long slender tongue or upper lip into the hands of the person who holds it. In their play we have several times noticed that they strike out with the fore limbs, and doubtless they use this action with effect in self-defence when attacked by beasts of prey. Of the peculiarities of the giraffe, and the general account of its natural history, some details will be found in the first volume of this Magazine (pages 125, 187, and 308), to which we refer our readers. The present individuals are young, and between ten and eleven feet in height; the markings are of a dark or chocolate brown, and there is a tuft of hair on each of the fore-knees.

Working Men.—The expression working class, or working men, must mean either those men who physically work without thinking, in which case it will not be very acceptable to those who arrogate it, and a wind or water-mill working day and night would be the beau ideal of a working man, or it must mean men who work and think. But if this is meant, who is not a working man and who is? Is the physician who follows his vocation at any hour of the day, the lawyer who sits up late at night, the scholar who sacrifices his health to his science, a conscientious editor whose work never rests, are all these, who rise much earlier and go to bed much later than those who call themselves working men par excellence, no working men? Is a Humboldt, who braves in the pursuit of his noble and chivalrous career, fever, beasts of prey and insupportable insects, under a thousand privations; is a Champollion, who exposes himself to the burning sun of Egypt to learn the lessons of the past; is a Parry, who dares the ices of the pole; a Davy, a Herschel, who enjoy no rest so regular, no health so sound, as that of any farmer—are all these not hard-working men? The division is entirely artificial and untenable; and therefore, if acted upon, highly mischievous. It is to be regretted, then, that so fictitious a thing is made, not unfrequently, a ground of political division, as though the interests of those who apply their mind to the changing and moulding of materials were separated from those who consume their productions, or assist them essentially in discovering the best way of mastering the material.—*Dr. F. Lieber, Plan of Education for Girard College for Orphans.*

Threshing Machines.—Threshing by the flail can only be done by robust, athletic men. If the superior strength of these men can be employed in another way to produce corn, and the decrepit, the women, and children, and two or three old horses, can do it as well, and it is found equally to answer the purpose of the farmer, why should it not be adopted? Does it matter if ten persons are employed for one day, or one person ten days? A wet day sometimes happens, when neither horses nor men can work in the fields: at the threshing-machine they can be usefully employed. By the want of necessary supplies of corn at market, corn will rise; for it is supply and demand which regulates our markets, and establishes prices and rents. A demand for more corn being made, the prices rise; the threshing machines are set to work to obtain the then wanted grain; the market is supplied, and the corn drops in price, and thus the community is benefited.—*The Golden Farmer.*

NATIONAL GALLERIES FOR THE FINE ARTS AT MUNICH.
THE GLYPTOTHEK.



[Sculpture Gallery, Munich.]

IN no country of Europe is there so much encouragement for the fine arts as in Bavaria. The present king, an enthusiastic admirer of all that relates to architecture, painting, and statuary, devotes nearly the whole of his private funds to the adorning of his capital with fine buildings, and filling them with the productions of the best modern painters and sculptors. Within these few years two grand edifices have been erected, designed to contain the king's collections of statues and pictures—the Glyptothek and the Pinacothek.

The Glyptothek, which was the first commenced, is now completed. It is a square building round an open court, and in the front is a splendid portico of twelve Ionic columns; the windows all open into the central court. This building was erected by the present king of Bavaria, out of his yearly savings, and was commenced when he was Crown Prince, for the purpose of containing his collection of statues. Mrs. Jamieson, in her 'Visits and Sketches at Home and Abroad,' was the first to make the English reader acquainted with the vast treasures of art at Munich, and with the merits of the modern German painters. She has given a minute description of the whole of this splendid building. "Just returned," she says, "from my first visit to the Glyptothek, with my imagination still filled with the 'blaze, the splendour, and the symmetry,' excited as I never thought it could be excited again, after seeing the Vatican; but this is the Vatican in miniature. Can it be possible that this glorious edifice was planned by a young prince, and erected out of his yearly savings? I am wonder-struck! I was not prepared for anything so spacious, so magnificent, so perfect in taste and arrangement."

The portico leads to a fine entrance hall, from which two side doors conduct to the galleries, (twelve in

number,) from 50 to 130 feet in length. This building was designed by Baron Klenze, one of many distinguished architects at Munich, and who is also the favourite artist, companion, and friend of the king. The objects of sculpture in the different galleries are so arranged as to form a progressive history of the rise and decline of the art. The most important examples, however, contained in this magnificent collection are the Egina Marbles, which every lover of art must regret were not purchased by this country along with the Elgin Marbles now in the British Museum, which would have made our collection, of the finest time of Greek art, the most perfect extant. These marbles says the author of the description of the Elgin and Phigaleian Marbles in the 'Library of Entertaining Knowledge,' "were probably executed in the age immediately preceding the time of Pericles; and exhibit an advance in the art of sculpture which, however interrupted by a succession of destructive wars, was about to approach a perfection of taste which no country has since surpassed. Outlines from a set of casts from these marbles, deposited in the Liverpool Royal Institution, have been recently engraved from drawings by Mr. Edwin Lyon." There are many other very valuable specimens of ancient art in the Munich collection, particularly the Barbarini Faun. One room is devoted to the works of modern sculptors; and this contains, amongst other celebrated works, the Paris of Canova, and the Adonis of Thorwaldsen. The ranges of galleries, forming the two sides of the square, are joined by two splendid banquetting halls, which are highly ornamented by designs in fresco from classical subjects by Cornelius, one of the best of the Bavarian painters. One of the most remarkable features of this building is the system of ornament which has been adopted by the Baron Klenze. Hitherto it has appeared

to be the object of the architects of galleries, that the walls and decorations should be plain and subdued so as not to interfere with the objects exhibited. M. Klenze, however, conceived that this was an error, and has enriched his rooms with the most splendid decorations both of coloured arabesques, and gilt and stuccoed ornaments in relief, each room partaking of the style of the school to which it is appropriated, and being ornamented by some admirable basso-relievos, designed and executed by Schwanthaler, the celebrated German sculptor. The experiment by all must be considered as successful; and the objects of art receive increased interest from the ornaments and the har-

monious colouring by which they are surrounded, and, as precious things, seem, as it were, enshrined in a beautiful casket.

The labour and genius which have been employed in the designing the ornaments and decorations of this splendid building, have had the effect of introducing a new style of decoration, which has already shown itself in the private houses and manufactures at Munich. The contrast between this building and the appearance of the vast hall at the British Museum, built for the reception of the Elgin Marbles, nay, even of the Galleries of the Vatican and of the Louvre, is most striking, and tends to prove that the Baron Klenze has been successful in his bold and arduous task.

ARTS OF ANCIENT EGYPT—GLASS AND PORCELAIN.

(Abridged from 'Egyptian Antiquities,' vol. ii.)

THE art of fabricating glass is of high antiquity; and it was probably known in Egypt as early as in any other country, and perhaps earlier. Beads of glass, generally coloured blue, probably with copper, are found on many mummies; and we have sometimes seen larger and more irregular pieces that have been taken out of mummy-boxes. Other ornaments of a coarse kind are also found made of glass*. It has been conjectured, and as we think with great probability, that the ornaments placed in the ears of the crocodiles, which Herodotus calls "stone pendants, made by fusion or melting," were of glass. It may be well to remark that the strict examination of M. G.-St.-Hilaire confirms Herodotus even in so minute a matter as the piercing of the crocodile's ears. He found the anterior part of the covering of the ear on a mummy crocodile pierced as if for the purpose of putting a pendant in it.

A kind of ancient porcelain is found in great quantities in Egypt. Sometimes it is covered with a species of enamel or varnish. It was used for making a variety of small figures, such as we may see represented in Denon's ninety-sixth plate, most of which are probably representations of some form of deity. There is one, which is a rare specimen, being a figure of the ichneumon or mangouste, in what Denon calls touchstone. It was the only representation that he met with in Egypt of this sacred animal. He purchased it in the island of Elephantine, where he found a woman wearing it suspended from her neck. We find the beetle also made of porcelain of all colours, of touchstone, cornelian, jasper, pot-stone, verde antico, and even baked clay. Bonaparte had a jasper scarabæus in his collection, with hieroglyphics on the under side: Denon says that this scarabæus had evidently been worked with the wheel. It is somewhat singular that the under sides of the scarabæi almost always differ one from another in the ornaments upon them.

The art of baking clay and fixing the varnish strongly upon it, must be considered as an ancient Egyptian art; vessels of this description, with their colours in high perfection, were found in the great tomb that Belzoni opened at Thebes.

A curious black substance has been found in some mummies of the more costly kind, which has often been incorrectly taken for a kind of stone: it is shaped something like a finger, only it is flat, but still rounded at the ends and sides; the length is from three to six inches, and the breadth half an inch or more. Sometimes two are united, and present an appearance like the index and second finger of the hand stretched out close to one another. Professor John observes† that

* Belzoni.

† Appendix to Minutoli, p. 352.—Mr. E. W. Lane observes that there are many pairs of fingers, of the form here described, of porphyry and other kinds of stone.



[Arabesque from the Room of the Gods in the Glyptothek, Munich.]

this substance is either obsidian or glass, and that it appears to be glass from its having a less degree of hardness than obsidian, and being more fusible. He considers it to be true glass coloured with iron. On the exterior it is of a dull appearance, and in parts is gilded.

As we find so many of the arts represented on the ancient paintings of Egypt, we might expect to find glass-making among them. Rosellini's plates (M. C. lii.) certainly appear to represent men blowing glass, but we would not positively assert this explanation to be correct. Still the antiquity of glass-making in Egypt is proved decisively by the evidence already adduced, and it wants no confirmation.

Pliny informs us (xxxvi. 26) that some sailors having landed on the shore of Phœnicia, at the mouth of the Belus, and wishing to cook their provisions, placed some masses of salt (of which their cargo consisted) under their pots to support them, there being no stones on the coast. The heat formed the salt and the sand of the shore into a transparent liquid mass, and thus gave origin to the substance called glass (*vitrum*.) But though this fact may be considered a truth, so far as to indicate the generally received opinion of the high antiquity of the Phœnician glass-houses, it is unsupported by the kind of evidence which determines the high antiquity of the art in Egypt—the specimens which have come down to our own day.

It seems not unlikely that Egypt was the parent country of the art, whence it was diffused among the Phœnicians, Greeks and Romans. During the latter part of the Roman Republic, and under the early emperors, the wealthy Romans made great use of glass in a variety of forms as an article of luxury. A great part of it was imported from Egypt and Phœnicia, and the art itself was also transplanted into Italy. From Italy it is probable that the Romans carried it into Spain and Gaul, for the art of glass-making was known in these countries in Pliny's time; and thus the remote parts of Europe received from the banks of the Nile the principles of a branch of industry which, revived and perfected in modern times, has contributed perhaps as much as any other to the comfort of life and the progress of science. M. Boudet has collected a great number of passages, principally from the Latin writers, which show that glass was very extensively used by the Romans, and that the art of the Egyptians and Phœnicians had succeeded in giving it a variety of forms that ministered to convenience or luxury. Drinking-glasses, burning-glasses, mirrors, and artificial gems, were all made of glass long before the time of Pliny. Glass was also let into the roof of the bathing-chambers at Rome, in order to light the rooms—a use which is still made of it at the present day in Egypt. Coloured glass was also used to ornament the walls and pavements of the houses of the rich. The art of glass-making still exists in Egypt, but its products are limited to clumsy bottles, pieces of glass slightly rounded for setting in the ceiling of baths, a kind of jug or decanter which serves for a lamp, and other similar coarse articles.

An enormous quantity of broken pottery is found about the sites of old Egyptian towns. It would argue no great skill in the ancient inhabitants of this country merely to show that they could bake vessels of clay—an art not unknown even to some tribes of the North American Indians, who yet appear to have no great taste for manufacturing. But it is the form of such objects of domestic use that deserves our particular attention, as we hold it to be impossible that a nation can be low in the scale of social refinement, where the forms of their furniture and utensils are such as have obviously been designed with the view of giving pleasure to the eye. In the tombs particularly, and also on the

sculptured monuments, we find ample proof that the Egyptians knew how to give a beautiful form to a common water pitcher, as well as to more elaborate articles of luxury.

War.—War undoubtedly occasions at first an immediate demand for men; it takes from the rich to give to the poor; and the rich make themselves ample amends by the increased value of property. Individuals with fixed incomes alone suffer from the first. In time, the labouring population having increased to the level of the war demand, wages fall again to their minimum; the rise of price stopping short of the increase of taxes, is no longer a compensation to farmers and manufacturers. After a few years of war an impatience for peace becomes universal; peace, however, like surgical operations, inflicts much immediate pain for the sake of prospective good; for all that part of the population fostered and supported by war, falling back on the rest, already not much at ease, makes them share in its distress. Farmers and manufacturers find they lose more by the decrease of consumption and the lowering of prices, than by the partial relief from taxation; individuals with fixed incomes are alone relieved. In due time, however, new branches of industry are discovered, new exchangeable produce brought to market; communications between countries long at war are opened by degrees; and production and consumption recover their equilibrium.—*M. Simond's Switzerland.*

IMPORTANCE OF THE CULTIVATION OF THE VINE IN FRANCE.

WHENEVER the commercial intercourse between France and England shall be regulated by better principles of economy than those under which it is at present conducted, wine will be the great staple with which the French will make their exchanges for English products. A few statements exhibiting the extent of production in this article in France will not therefore be devoid of interest. In presenting the following facts, it is necessary to state that we have borrowed largely from Dr. Bowring's 'Report on the Commercial Intercourse between France and Great Britain:—

According to the estimates of M. Cavoleau, who obtained a prize given by the Institute for an elaborate work on the vineyards and vines of France, the quantity of vineyard-land in 1806 was about 4,142,600 English acres, and in 1827 about 4,265,000 acres. The calculations of the French Statistical Society show that in 1788 the number of acres in cultivation was 3,988,800 acres, and in 1829 about 5,104,000 acres. The vine-growers estimate the increase of vineyards since 1788 at 28 per cent.

France is divided, for fiscal purposes, into 76 wine-districts, in the same way that England is subdivided by the Board of Excise into districts termed "collections." The total superficies of France is not quite 53,000,000 hectares, the uncultivated lands amounting to nearly one-eighth of the whole. More than one-thirtieth part of France, including the waste lands, is cultivated in vineyards: this is equivalent to about a seventh part of England. If the counties of Bedford, Buckingham, Berks, Hertford, Huntingdon, Middlesex, Oxford, Rutland, Surrey, Westmoreland, and Worcester, were entirely covered with vineyards, the vineyards of France would exceed them in extent by 375 square miles. The distance from London to York is 196 miles; and if the land on each side of the road produced vines, instead of grain and food for cattle, each side of the road to the extent of above sixteen miles must be appropriated to this purpose in order to equal the breadth of land in France which is devoted to the vine; or, in other words, a tract of country nearly 200 miles long and 33 broad.

M. Cavoleau estimated the *value* of the annual produce of the vineyards at 21,615,572*l.*; the Sta-

tistical Society at 28,040,000*l.*, and in 1788 at only 14,260,000*l.*

M. Cavoleau is of opinion that the *quantity* of wine produced in a year is 812,808,040 gallons, or about 200 gallons an acre. The estimate of the Statistical Society is 998,932,900 gallons, worth on an average 6 $\frac{3}{4}$ *d.* per gallon; and the production of 1788 is estimated at about 610,750,000 gallons.

The wine-growers are supposed to be 1,800,000 in number.

A commission which was instituted a few years ago to examine into the operation of the tax on wine, which amounts to about 2,900,000*l.* per annum, assumed the total produce to be 924,020,000 gallons, and calculated by approximation the manner in which it was disposed of. They estimated that there was—

	Gallons.
Consumed by the Proprietors, not being subject to the Duty	198,000,000
Employed in the manufacture of Brandy	141,680,000
Loss and waste among the Growers	91,344,000
Loss in conveyance, and in the hands of Dealers	44,000,000
Exported	24,530,000
For the manufacture of Vinegar	11,000,000
Duty recovered on consumption is	308,000,000
And the fraudulent consumption is	105,466,000

The loss by evaporation was calculated at 12 per cent. per annum on the small, and 5 per cent on the large casks.

The total average export of wine is about 22,000,000 gallons, of an average value of nearly 2,000,000*l.*

The district in which the production of wine is carried on to the largest extent, and where the cultivation of the vine is the most advanced, and the qualities of the wine of the highest order, is the department of the Gironde. The superficies of the Gironde is 2,500,000 acres, and the extent of vineyards is equal to 350,000 English acres. The average produce is between 50,000,000 and 60,000,000 gallons, five-eighths of which are red, and three-eighths white wine, the whole, or nearly so, being suited to foreign demand. In very favourable years the production will amount to 75,000,000 gallons.

The value of vineyard property varies very much. The Monton estate, consisting of 135 acres, was sold in 1830 at the rate of 356*l.* per acre: this is the highest price ever paid. The estate of Lafitte, consisting of 262 acres, was sold in 1803 at the rate of 183*l.* 4*s.* per acre. Both these estates are situate in the Medoc district. About 5154 acres of Medoc wine estates have been sold in the present century; the average amount obtained was 64*l.* per acre. The demand from England for the fine Medoc wines has raised the value of the land which produces them.

The difference in the value of wine of the same vineyard varies exceedingly from one year to another, according to the season being favourable or unfavourable. The produce of Lafitte, Latour, and Chateau Margaux, which are the most esteemed vineyards, has been as low as 4*l.* a hogshead in a bad year. On the other hand, it has under different circumstances, been as high as 30*l.*

The condition of the population employed in vineyards is an interesting subject of inquiry. A communication addressed to Dr. Bowring by the members of the Chamber of Commerce at Rheims affords some information on this point, which we subjoin:—In the arrondissement of Rheims the number of vine-proprietors is 11,903. This large number of owners is owing to the division of property,—divisions so much the more multiplied, as there is not a single vine-dresser working at piece-work who does not rent some plot of vineyard, and thus the number of separate holders of vineyards is from 22,000 to 23,000. The small labour-

ing proprietors are generally burdened with families, and not well off. They form in society an interesting and very laborious class, making the best appearance they can by severe economy. As soon as there is a promise of a good harvest, they purchase some vineyard-ground, often without prudence, and beyond their means. Afterwards, if bad years come on, they borrow to free themselves. If, in order that they may not mortgage their little property, they have recourse to usurers, they sign and renew bills on very disadvantageous terms. If they borrow on mortgage, the rate of interest is nominally 5 per cent. to the profit of the lender, but in reality from 6 to 7 per cent. at the cost of the borrower, on account of the expenses of the transaction.

In the district where the Macon and Beaujolais wines are produced, the receiver-general of the department of the Rhone gave Dr. Bowring the following account of the condition of the population whose interests are connected with the vineyards:—"Each hectare of vines (nearly 2 $\frac{1}{4}$ acres) represents a capital of from 5000 to 6000 francs (200*l.* to 240*l.*) on an average. The expense of cultivation may be estimated, everything included, at about 200 francs (8*l.*) the hectare. The labour of each vigneron (vine-dresser) comprises nearly two hectares, and occupies a whole family. The cultivation of the vine is carried on by an equal division of the produce between the proprietors and the cultivators; the latter are, indeed, a species of participating colonists termed vigneron. This method, by establishing a community of interest between the proprietor and the labourer, tends to render their relations intimate and paternal. It attaches the cultivator to the ground, equally with the proprietor himself, and in some respects removes him from the class of dependent workmen. This class in general is not unprosperous: all those who have habits of labour and economy live at their ease. They begin to live rather better than they formerly did; their wants are attributed to the dearness of articles of consumption, of which they are deprived, such as meat, which they very rarely eat, and iron, of which they use large quantities for their farming. They sometimes suffer from the want of sale for their productions."

M. Joannot, the intelligent librarian of the Bordeaux public library, has afforded ample information respecting the moral and social condition of the population engaged in vineyards in the department of the Gironde. He states that the proprietors of vineyards producing wines of the first quality are rich, but the others are not in prosperous circumstances, and if they were not also engaged in farming it would be impossible to support themselves. M. Joannot says that, owing to the ambition of the small landowners to increase their possessions, they often purchase land at a price very much above its real value. The average daily pay of a vine-dresser is 1*s.* 4*d.*; a woman and child together gain about 7 $\frac{1}{2}$ *d.*; and the most skilful labourer, who provides himself with board and lodging, obtains from 1*s.* 8*d.* to 1*s.* 11*d.* per day. The vintager who is fed and lodged by his employer receives from 7*d.* to 1*s.* and sometimes 1*s.* 3*d.* per day. Women and children employed in the vineyards receive half the pay of the men. The workmen attached to the vine-press receive 4 $\frac{1}{2}$ *d.* per day more than the others. In the Medoc district the vineyard is cultivated on the following terms:—A certain portion of land, generally about seven acres, is divided according to agreement, and it is then managed by the vine-dresser. It is his duty to cut the vines,—prune the shoots,—to tie them up in bundles and carry them out of the vineyard; and he also attends to all the necessary processes which the successful culture of the vine demands, such as loosening the ground about the roots of the plants, and breaking up the ground in places which the plough could not reach: all the other expenses are at the proprietor's cost. The vine-dresser receives a salary

for himself and family of 6*l.* in money, besides half the cuttings, four barrels of a liquor called "piquette," made from the wastage of the wine-barrels, the remnants of the grapes, &c., a lodging, and a small garden. It is usual amongst the extensive growers of the Saunterne and Barsac grapes to employ whole families of vine-dressers to cultivate the crops at fixed wages. Each family is boarded and lodged on the estate, and has a small house, garden, hemp-field, and half the cuttings of the vines collected on the portion of ground they cultivate; and they have, moreover, permission to grow vegetables on several of the furrows in the vineyard. They receive besides, for each man and woman, fifty kilogrammes (110 lbs.) of rye, and half that quantity for each child. The head of the family receives an annual addition of from 2*l.* to 2*l.* 8*s.*; and a child, as soon as it commences working, is paid at the rate of 24*s.* a-year.

The manager of a large wine property in Medoc gives nearly a similar account of the condition of the vine-dressers on the estate under his superintendence. A vine-dresser who is the head of a family, and whose wife works, receives from 18*l.* to 20*l.* a-year in money, and is provided with four barrels of piquette, lodging, a garden, and land suited for the growth of hemp to supply the family with linen, and he has one-half of the refuse wood of that portion of the vineyard which he cultivates, besides medical attendance and medicines at the cost of the proprietor. This account adds that the ignorance of domestic economy amongst the vine-dressers is usually very great in the department of the Gironde. Another account says that instruction is but little diffused among them. Those who have learned to read when young, no longer think of reading at a more advanced age, although this is exactly the period when the greatest possible advantage would be derived from the perusal of useful books. When young, it is stated that they read nothing but the catechism and prayer-book, and a complaint is made that books of a more attractive kind are not circulated. As a consequence of this state of things, they are extremely fanatic, and having few sources of rational amusement and instruction, they either "go to bed early," for want of occupation, or spend their time at the public-houses. M. Joannot says they are in general endowed with great penetration, but they are ignorant, superstitious, devoid of religion, proud, setting at defiance the educated and the rich, selfish, little fond of work; yet he states that they are kind and hospitable, adding, however, that family ties have little weight amongst them—the sickness of one of their cattle distressing them more than that of their wife or child. Almost all of them live without care for the future, and die unregretted. This is a disastrous picture of the moral state of so numerous a class, and it will require many efforts to lift them out of that degradation in which they are placed by reason of their ignorance of their own nature, and the duties which are imposed on them. France will soon be covered with parish schools, and the instruction which may be obtained there will, it is to be hoped, do something towards improving their character. We must add, that though thus spoken of, M. Joannot says "their sobriety is worthy of imitation."

In some parts of the department of the Gironde, where the elevation of the country renders the air extremely pure, the men are finely formed, have blue eyes and light hair, and pretty women are common among them. The population of these parts is much devoted to pleasure and dress, and they are of a gay temperament.

In the district where the Macon and Beaujolais wines are produced, M. Delahante, a public functionary, affirms that "it is certain that within the last

twenty years civilization has made great progress among the population employed in the cultivation of the vine. There are few of the old people who know how to read, and few of the young who cannot do so."

M. de Brimont, of Rheims, says of the vine-dressers of the Champagne district, that as to education they are on an average with the population of France generally, "but they are more sober and orderly than the manufacturing classes in general."

State of the Fine Arts in Geneva.—M. de Candolle, Professor of botany at Geneva, but whose reputation is European, made use, in a course of lectures, of a very valuable collection of drawings of American plants, intrusted to him by a celebrated Spanish botanist, who having occasion for this collection sooner than was expected, sent for it back again. M. de Candolle having communicated the circumstances to his audience, with the expression of his regrets, some ladies, who attended the lectures, offered to copy, with the aid of their friends, the whole collection in a week, and the task was actually performed. The drawings, 860 in number, and filling thirteen folio volumes, were executed by 114 female artists; one of the ladies, indeed, did forty of them. In most cases the principal parts only of each plant are coloured, the rest only traced with accuracy; the execution in general very good, and in some instances quite masterly. There is not, perhaps, another town of 23,000 souls, where such a number of female artists, the greater part of course amateurs, could be found. Notwithstanding the wide dispersion of the drawings there were not any lost; and one of them having been accidentally dropped in the street, and picked up by a girl ten years old, was returned to M. de Candolle, copied by the child, and is no disparagement to the collection. On another occasion, several drawings were carried to a wrong house, but there too they found artists able and willing to do their part. This taste for the arts and for knowledge in general is universal.—*M. Simond's Switzerland.*

Division of Employments.—The same complete division of employments, which makes the English farmer nothing but a farmer, makes all the English people who are engaged in manufactures nothing but manufacturers. Further, whilst in France and America the capital of one man is frequently divided amongst several different manufactures, the attention of the English manufacturing capitalist is confined almost exclusively to a single object. Thus the English manufacturer is, as such, a man of single purpose, "a man with one idea." Hence that earnest, unremitting and successful pursuit of improvement, which is conspicuous in every branch of English manufacture. Another peculiarity in English manufactures seems worthy of remark—I allude to the congregation in one place of vast numbers who are engaged in the same branch of manufacture. In some cases, no doubt, the main seat of a particular fabric is determined by natural circumstances, such as abundance of coal or iron, or falling water; in other cases it appears to have been settled by accident. In every case, however, that congregation of numbers engaged in the same pursuit, by promoting the interchange of many persons' thoughts on one all engrossing subject, by exciting the inventive powers, by preventing a fortunate discoverer from monopolizing the use of his invention, and above all by stimulating competition, must have had a large share in the progress of improvement. In England, accordingly, all the most flourishing manufactures are carried on in large factories, with large capitals, and by a great number of hands, brought together for the purpose of distributing amongst them the several parts of each work. Those manufactures which are conducted by small fractions of capital and labour, such as the silk-works of Spitalfields and the lace-works of Buckinghamshire, are rapidly perishing; that is, they are in the course of being superseded by the use of large factories; those which have been mentioned, by the large silk-factories of Macclesfield and Manchester, and by the large lace-factories of Nottingham and Tiverton.—*England and America.*

* * The Office of the Society for the Diffusion of Useful Knowledge is at
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RIEVAULX ABBEY.



[The Abbey of Rievaulx, from a Drawing by W. Westall, A.R.A.]

THIS fine monastic ruin is in the parish of Helmsley, North Riding of Yorkshire, half-way between Ripon and Scarborough, and about twenty-five miles north-east of York. Several interesting historical associations are connected with the immediate neighbourhood of Helmsley. Helmsley Castle was the retreat of Villiers, Duke of Buckingham, after his retirement from the court of Charles II. The adjacent town of Kirkby Moorside was the last scene of his humiliation, after health and fortune had been recklessly thrown away in a life of dissipation. Here he breathed his last, though not "in the worst inn's worst room," as the lines by Pope would infer, there being no tradition of the humble dwelling in which the fallen duke closed his career having been used at any period as a public-house. The event is thus briefly recorded in the parish register:—"Burials: April 17, 1687. Gorges Vilaus, lord dooke of Bookingham." Helmsley Castle stood a siege during the civil war, but was compelled to surrender to the Parliamentary forces, and was afterwards dismantled.

Ryland Abbey is an interesting ruin about five miles from Helmsley. It was a fine specimen of ecclesiastical architecture, founded by the monks of Furness, who were driven from their establishment in Lancashire during an incursion of the Scots. When the abbey was dissolved in 1540, its revenues amounted to 238*l.* 9*s.* 4*d.*

Rievaulx Abbey was one of the largest monastic structures in England. The probable length of the nave is estimated at 150 feet, and the whole length of the building at 330 or 340 feet. The choir is 144 feet long and 63 feet wide, and the transept 118 feet long and 33 feet wide. The church and the refectory are the principal parts of the edifice which remain. The abbey was founded in 1181 by Sir Walter Espee, whose only child, a son, was killed by a fall from his horse at Kirkham; in consequence of which the afflicted parent resolved to devote the greater part of his possessions to religious purposes, and he accordingly built abbeys at Rievaulx and Kirkham in Yorkshire, and at Warden

Bedfordshire. Rievaulx is situated in a valley, the surrounding heights being covered with wood to their summits. The village is close to the abbey, and consists of a few scattered cottages, but they do not destroy the harmony of the picture, which, with the ruin, the wooded heights, a winding river, and two picturesque bridges, form a combination of objects that cannot fail to strike the least practised eye. One of the Duncombe family, in whose possession the site has remained since 1695, formed a fine terrace on the hill which overlooks the ruins. It is said by many to be the finest in England.

On the monasteries of the first class being dissolved, Rievaulx, the revenues of which were valued at 378*l.* 10*s.* 2*d.* per annum, was seized by the crown, and afterwards granted in exchange to a descendant of the Espee family. The Duke of Buckingham obtained possession of it through his marriage, and the trustees of George, the second duke, sold it in 1695 to Sir Charles Duncombe, an ancestor of Lord Feversham, the present owner.

The dissolution of monastic establishments in England, in the reign of Henry VIII., is a circumstance of great historical interest, and closely connected with the circumstances under which considerable property is now held, both by laymen and for ecclesiastical purposes. The question of breaking up the monasteries was formally proposed by Cromwell, one of the ministers of Henry VIII., in the year 1535, and a general visitation of the monasteries by commissioners was ordered. It was first determined to meddle only with the smaller monasteries; and a bill passed both houses of parliament, in 1536, giving to the king all monastic establishments, the clear yearly value of which did not exceed 200*l.*, with the property belonging to them, both real and personal, vesting the possession of the buildings and lands in those persons to whom the king should assign them by letters patent; but obliging the grantees, under the penalty of ten marks per month, to keep on them a honest house and household, and to plough the same number of acres which had been ploughed on an average of the last twenty years.

Dr. Lingard states, in his 'History of England,' that it was calculated that, by this Act, about 380 religious communities would be dissolved; and that an addition of 32,000*l.* would be made to the yearly revenue of the crown, besides the present receipt of 100,000*l.* in money, plate, and jewels.

The commissioners who were appointed to put the Act in execution were ordered to proceed to each religious house to announce its dissolution to the superior,—to make an inventory of the effects,—to secure the convent-seal and the title-deeds,—and to dispose of the inhabitants according to certain rules. The superior received a pension for life: of the monks, those who had not reached the age of twenty-four were absolved from their vows, and had to seek anew the means of existence. Others of the monks, who were placed in another class, were divided among the larger monasteries, or, in case they wished to leave the ecclesiastical state, were promised employment. The nuns were more hardly dealt with: each received a single gown from the king, and in other respects were thrown upon the world, or the support of friends.

The people were strongly affected, in many parts of England, by the consequences which resulted even from the dissolution of the smaller monasteries. The poor had formerly been fed at these establishments, and were now deprived of this ancient resource. Persons of property contended that the wealth of the monasteries ought not to fall into possession of the crown, but that it should revert to the representatives of the ancient donors. In the autumn of 1536 the state of public feeling was manifested by an insurrection

in the northern counties, which was joined, most probably from inclination, by the Archbishop of York, several noblemen, many knights, and most of the gentry;—indeed, all whose attachment to ancient manners and customs was deeply rooted could not fail to desire that the progress of innovation should be checked. The insurrection, though of a formidable nature, was ultimately put down. This movement is generally spoken of as the "pilgrimage of grace," the banners of the insurgents being painted with the image of Christ crucified, and the chalice and host, the emblems of their faith. In many districts they placed the ejected monks in their former convents.

It appears now to have been the determination of the king and his ministers to deal with the larger monasteries in the same way as with the smaller ones. For a considerable period, commissioners were at work investigating the circumstances and condition of each establishment. In 1539 a bill was brought into Parliament vesting in the crown all the property, moveable and immoveable, of the monasteries, and by the spring of the year 1540 it had been surrendered into other hands.

Dr. Lingard gives the following scale of pensions allotted to the ejected inhabitants of the monasteries. To the superiors, from 266*l.* to 6*l.* per annum; priors of cells, generally about 13*l.* and in a few instances 20*l.*; to the other monks, pensions of 6*l.*, 4*l.*, or 2*l.*, with a small sum to provide for immediate wants on their departure. The pensions to nuns averaged about 4*l.* It should be recollected that the value of money has greatly changed since that period.

As soon as an abbey was surrendered, the commissioners, according to Burnet, proceeded to break the seal and assign pensions to the members. The plate and jewels were reserved for the king; the furniture and goods were sold. The abbott's lodging and the offices were left standing for the convenience of the next occupant: the church, cloisters, and apartments for the monks were stripped of the lead and every saleable article.

It appears from Rymer that the lands sold at twenty, the buildings at fifteen years' purchase; the buyers were to hold of the crown, paying a reserved rent.

According to the 'Liber Regis,' and other authentic sources, the annual revenue of all the suppressed monastic houses amounted to 142,914*l.* 12*s.* 9¼*d.*, being about the one-and-twentieth part of the whole rental of the kingdom, if the estimate of Hume be correct, which assigned the amount at 3,000,000*l.* The amount of the estimates of the annual value of real property of England and Wales, as assessed in 1815, was about 52,000,000*l.*

On the suppression of the religious houses, Henry VIII. created six new episcopal sees, those of Westminster, Oxford, Peterborough, Bristol, Chester and Gloucester, and fourteen abbeys and priories were converted by him into cathedral and collegiate churches, to each of which a dean and a certain number of prebendaries were attached. The abbey lands were by degrees alienated from the crown.

MANNERS OF THE NORTHERN COAL MINERS.

[From a Correspondent.]

In the supplemental numbers of the 'Penny Magazine' for March and April, 1835, respectively, the account there given of the collieries of Durham and Northumberland is so accurate and replete with interesting information respecting the course pursued in obtaining coal, and the manner in which it is prepared for the market, that I am induced to think some further particulars relative to the peculiar habits of the persons

employed in the winning of this great article of commerce will be no less interesting to the readers of this Magazine.

The miners of the extensive coal-districts of Durham and Northumberland, at an early period of life, in most cases ten years of age and frequently earlier, commence their laborious calling as trap-door keepers, (described on the left of the engraving at page 125, vol. iv.,) which employment consists in opening and shutting, as occasion requires, the doors which are placed at intervals along the various tram-lines at the bottom of the mine; and, by different gradations, ultimately arrive at the rank of hewers, described at page 127, vol. iv.

The wages which the colliers receive in these various gradations differ, of course, in amount; but these, and likewise the general appearance and dress of the miners, have been so ably and accurately detailed and described in the supplemental numbers of this Magazine already referred to, that it is unnecessary to repeat this information here.

Notwithstanding the hardship and danger which the miners daily undergo, they are commonly strangers to poverty and want; their earnings being of an amount not only sufficient to prevent this, but, when properly disposed of, to maintain themselves and families very comfortably. Their cottages, particularly those of the steady and temperate part of them, generally exhibit inside an appearance of comparative cleanliness and comfort seldom indeed to be met with in the abodes of the poorer classes of populous towns. They usually consist of two apartments; the principal one a room of about sixteen feet by fourteen, with a floor composed of brick and well washed and sanded; and the other a sort of garret over the one just mentioned, and rendered accessible by means of a small ladder.

The three principal and most indispensable articles of furniture in the miners' houses, are a large four-poled bed, an eight-day clock, and a chest of drawers. The space beneath the drawers is the receptacle for loaves of bread of unusually large dimensions but of excellent quality; whilst that between the ceiling of the apartment and the top of the drawers, is always occupied with a lot of china teacups and saucers, piled up in the most fantastic manner, and exhibiting the inevitable consequence of total destruction in the event of suddenly "slipping from their pedestal" by accident or otherwise. On one side of the cheerful fireside is a small oven for baking small cakes, or other necessaries, in those days when the fire is not put to the large ovens which stand at intervals "few and far between" before the doors of a colliery hamlet:—

"While broken teacups, wisely kept for show,
Ranged o'er the chimney, glisten in a row."

A large oaken or fir table for general use, usually stands before the window, accompanied on one side by a form of the same length. Another table of a turn-over kind, and made of mahogany or birch, stands at one side of the apartment, on which are usually placed a few books, commonly called number-books, and a very showy tea-board. These are also "wisely kept for show," for they are seldom used. Indeed to place every article worth seeing in as conspicuous a light as possible seems to be the ruling passion of the pitman's wife in household affairs. This is strongly illustrated in the case where her stock of china is so large as not to admit of being placed on the top of the drawers. So great an aversion has she to putting the superfluous part away, that she places them in a small corner cupboard, and either has a glass door to it, or, if a wooden one, allows it to stand continually open.

In some collieries the miners have, very laudably indeed, formed themselves into friendly societies for the purpose of providing against disease, and the more awful calamity of accidental death, which very often

suddenly befalls them. These societies are conducted by a secretary and treasurer, usually chosen from among the most intelligent and respectable of their own body. The members deposit annually in the hands of the treasurer a certain sum of money, and in the season of ill-health receive a weekly allowance; or, in the event of the death of themselves, or any other of the members of their own families, a sufficient sum is immediately advanced out of the funds to enable the survivors to defray the expense incurred in burying their deceased relatives.

Beyond this, comparatively few of the miners, notwithstanding the considerable sums which most of them earn, are in the habit of accumulating money to meet the infirmities of age, to which they are sooner liable than any other class of men, or the various other physical contingencies to which their hazardous avocation continually subjects them.

With respect to the moral condition of the miners, truth and justice compel me to state that it suffers materially when contrasted with that of the poorer classes of society where the blessings of education and the diffusion of useful knowledge are enjoyed. It is true

"Some sterner virtues o'er the mountain's breast
May sit, like falcons cowering on the nest:
But all the gentler morals, such as play
Through life's more cultured walks, and charm the way,
These, far dispersed, on timorous pinions fly,
To sport and flutter in a kinder sky."

But it is gratifying to be able to relate that the efforts which are made by the Wesleyan and Primitive Methodists, as well as by other religious bodies, are beginning to be crowned with the most satisfactory and encouraging results.

Formerly, and not many years ago, the sole amusements of the miners were cock-fighting, badger-baiting, quoiting, bowling for ruinous sums of money, attending horse-races, and gambling of the lowest description. But of late years these barbarous pastimes have, in a great measure, been discontinued, and they begin now to turn their attention and devote their leisure to more rational and pleasing pursuits. Some few years ago the miners belonging to one of the most extensive of the collieries formed themselves into a class for the purpose of learning instrumental music, and by associating together they raised weekly such a sum of money as enabled them to procure the assistance of a person capable of teaching the use of the various musical instruments: the scheme was successful, and has since been almost universally adopted by the miners of other collieries. Almost every colliery of any considerable extent has its band of music, who assemble together in the evenings, and on public occasions, to exercise themselves in this delightful pursuit. Some, too, delight in cultivating the rarer specimens of flowers and plants, in situations where the atmosphere of the colliery, which is very injurious to vegetable life, will admit of this; and they are frequently members of the neighbouring Horticultural and Botanical Societies; but the number of those who find pleasure in such a delightful study as the rearing of flowers is very limited indeed. I am afraid that this pursuit can never be carried on to any great extent in the immediate neighbourhood of a colliery, which is singularly unfavourable to the propagation of vegetable life. In these ungenial regions, "where smoke and dust bedim the golden day," the huge volumes of dense smoke continually issuing from the tall chimneys, and borne away in slow dismal pageantry on the wings of the passing breeze, render the atmosphere impure and unhealthy, the effects of which are very visible on the surrounding vegetation; all vegetable life, to a considerable distance from the scene of operations, exhibiting a blighted appearance, and never that fresh-

ness of green which pervades it in more salubrious situations.

I am sorry to say, however, that the evil habit of intemperance is still very prevalent among the colliers, and that notwithstanding the unwearied efforts of the Wesleyan and Primitive Methodists to promote their moral and intellectual improvement, vice and ignorance still prevail to a considerable extent. In most places their wages are paid them at the end of every fortnight, and immediately after the receipt, it is the universal rule among them—admitting, of course, of some exceptions—to go directly to the public ale-house, and there squander away, in the purchase of a nauseous potation, a considerable part of the hard-earned fruits of their industry.

But before pronouncing an unfavourable opinion upon the moral and intellectual condition of the miners, all the peculiar obstacles which lie between them and the commonest mental acquirement, and the great difficulty or the almost impossibility of their ever

attaining to anything like a pure and universal state of morality, should be taken into the account. It should always be borne in mind, that the miner's calling is fraught with hardships and dangers peculiar to few or no other occupations. In the tenderest period of human life he is consigned to those gloomy caverns where his forefathers and friends have begun and lingered out a toilsome existence,—

“ Amidst the darksome wonders
Which earth's vast caves conceal,
Where subterranean thunders
The miner's path reveal.”

With their example before his eyes, and shut out from all the blessings which most other classes of society enjoy, from year to year he pursues his stern, unyielding vocation, till accident, or the infirmities of age, or death,

“ ———— the poor man's dearest friend,
The kindest and the best,”

puts a period to his toil.

NATIONAL GALLERIES FOR THE FINE ARTS AT MUNICH.

THE PINACOTHEK.



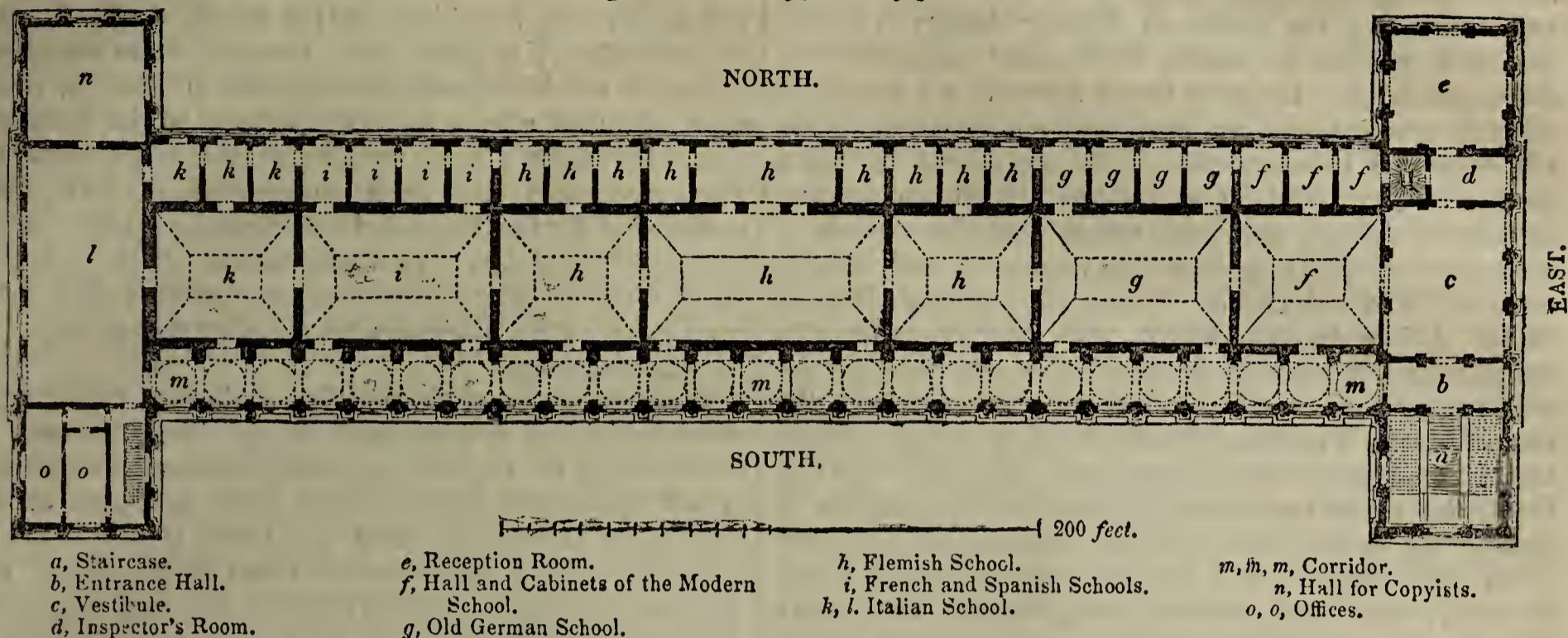
[Picture Gallery, Munich.]

ALTHOUGH the private collection of sculpture of the King of Bavaria is very rich and valuable, it is in pictures that he is able to rival the finest galleries of Europe. He possesses the pictures of the celebrated gallery at Dusseldorf, the various collections at Mannheim, Deuxponts, Heidelberg, and Ratisbon; and, moreover, the interesting Boisserie Gallery, collected by the two brothers of that name, who were for a long time employed in making selections from various convents, and other public buildings and private collections, of the productions of the early painters of Germany. This collection, with a vast number of other pictures, is kept for the present in a palace of the king's,

Schleissheim, near Munich, until the great National Gallery at Munich (now nearly completed) is finished. This building, also undertaken by the king, is called the "Pinacothek," and is upon a grand scale: Baron Klenze is the architect. As our own National Gallery is in progress, an account of this splendid work will be considered particularly interesting in this country: we have, therefore, given an engraving of the elevation of the Gallery, and have added a plan from which the arrangement may be best understood.

The first stone of the Pinacothek was laid on the 7th of April, 1826 (the birthday of Raphael), by the king: it is intended to place the pictures in it in the course of

[Plan of the Upper Story.]



the present summer (1836). The different saloons have been planned and arranged with peculiar reference to the principal pictures which are to be placed in them; and the whole building is capacious enough to contain about 1600 of the best pictures to be selected from the Dusseldorf Gallery, the Boisserie collection, and the various other collections of the king. The same plan as regards ornament adopted in the Glyptothek has been followed here; the ceilings of different rooms are enriched with splendid gilt and white ornaments, and with medallions and portraits of the most celebrated painters, all designed by the Baron Klenze, and executed by some of the first artists at Munich. The floors and the dados round each room are of different coloured Bavarian marbles, and the walls are to be hung with rich silk, the colours of which are to be selected, as far as possible, to suit the different pictures to be placed there. The former are to be so dispersed as to form part of the architectural ornaments of the rooms, thus giving the whole the appearance of one uniform design. The Gallery is an oblong edifice, with two wings at the extremities. The body of the building is of brick; the balustrades, entablatures, and windows are of stone. It is intended to place the building in the centre of a fine public garden, which, however, is not yet completed. It consists of an upper and lower story: the ground-floor is to be appropriated to the collection of Etruscan vases and mosaics, the king's fine cabinet of drawings by the ancient masters, and the collection of engravings, which is said to be one of the richest in Europe;—a library of works relating to the fine arts, an entrance-hall, and accommodations for the students and officers of the establishment. It is the upper floor which is to contain the pictures: this consists of a reception-room, and along the front of the building runs a corridor, about 400 feet in length and 18 in width, lighted by twenty-five lofty arched windows, having on the other side ten doors opening into the seven halls for containing the larger pictures of the collection; on the north side of these seven halls are twenty-three cabinets, in which are to be placed the smaller pictures of the different schools, to which the adjoining halls are appropriated, all lighted from the north. The centre halls, which are about fifty feet in height, are lighted by lanterns from the top. The mode of arranging the different schools is shown in the plan. From the windows of the long corridor to the south a splendid view is afforded of the fine range of the Tyrolean Alps. The whole of this corridor, which does not contain any ancient picture, is painted in fresco, in imitation of the Loggie of the Vatican by Raphael. Many of these frescos are already finished. The cupolas over each window contain scenes from the lives of the most distinguished painters, chrono-

logically arranged, thus forming a graphic history of painting, an appropriate accompaniment to a gallery of pictures.

It is from this corridor that the visitor to the Gallery may enter through any one of the doors at once into the particular school which he wishes to inspect, without first passing through the whole range, and having his mind distracted by a multiplicity of objects or his eyes dazzled and fatigued.

There is one other point which should be particularly mentioned with regard to the picture gallery, which is the extreme care which has been taken by Baron Klenze, assisted by other scientific persons at Munich, with regard to the arrangement of the lanterns by which the centre halls are lighted. These are so managed that the light is uniformly distributed over the four sides of the hall, so that on looking at the corner it is impossible to distinguish the line of junction of the angles; and between the darkest and the lightest part of the walls not above two or three degrees of difference are perceptible. Both the statue gallery and the picture gallery, as well as all other repertoires of art belonging to the king, are freely open to the inspection of the public on stated days.

KNIGHTS OF MALTA.—No. III.

THE Knights found Rhodes in possession of a set of Mohammedan pirates and Greek rebels, who had long set the falling government of the eastern emperors at defiance. The island itself was in a deplorable state, scarcely a vestige remaining of its ancient prosperity and splendour. Greeks and Turks, however, left off cutting one another's throats, and, joining arms, made such a stand against the Christians of the West, that it took the Hospitallers four years to reduce them. During this time many battles were fought; and so severe was the loss occasioned to the Latins, and so dim the prospect of final success, that the surviving crusaders and adventurers, band after band, returned to Europe, until none were left but the troops of the Order, who were at that time laying siege to the strong capital of the island. At this juncture the Greek emperor, by an extraordinary effort, had thrown a considerable force upon the island, with the vain hope that, should he dispossess the Latins, the Greeks and Mohammedans would submit to his sway. Abandoned by their allies, and hemmed in by their enemies, who continued to increase their force, the Knights, from being besiegers, saw themselves besieged in the works they had erected for the purpose of taking the city of Rhodes. For some time they had been in want of money and provisions; but the energetic efforts of Fulk de Villaret, the Grand Master, in the mean time had been taking effect: loans contracted with the bankers

of Florence, and sums supplied by the commanderies and estates of the Order in Europe, began to arrive, and with gold in his hands, Fulk could procure food, men, and arms. He soon found himself in a condition to make a sortie, and issuing from his intrenchments, he fell upon his beleaguers. The movement led to a general engagement, in which the Grand Master was victorious, though not until he had lost the bravest of his knights. The siege was then renewed; and, finally, on the "Festival of the Assumption of the Blessed Mary" (15th August, 1310), the principal outworks being taken, the Knights advanced, at the head of the troops, to the assault,—succeeded in planting the Grand Master's standard on the walls, and then Rhodes was carried with much slaughter. The historians of the Order state that the Knights cut the infidels to pieces, but spared the Christian inhabitants, and gave them their liberty; but Christian as well as Turkish property,—the lands, houses, and goods of the native Rhodians,—were seized by the conquerors, who, hating the schismatic Greeks almost as much as the infidels, may not have been so sparing of Christian blood as was reported.

Shortly after these successes the Grand Master reduced the neighbouring islands of Telos, Syme, Nisyros, Cos, Calymna, and Leros, and established the authority of the Order in nearly every one of that famous group called by the ancients the "Sporades," and of which Rhodes may be considered the chief. After these conquests, which put him in possession of what might be called a little kingdom, the Grand Master returned in triumph to Rhodes, where he hoped to enjoy peace and repose; but in looking forward he had not made a proper estimate of the power and ambition of the Turkish princes of the House of Osman, who had taken a large part of the neighbouring continent of Asia Minor from the Greeks, and who, shortly after his return, fell upon him at Rhodes. The Knights were hotly besieged within the walls and towers they had so recently taken, and which, from want of time, they had not put in sufficient repair. The Osmanlis, with the vigour and fierceness that distinguished their early career, made several assaults, but the Hospitallers repelled attack after attack, and eventually forced the Turks to raise the siege and embark for the main.

As soon as their backs were turned, Fulk de Villaret, who had other and higher talents than the merely military, applied himself assiduously to the means of reviving commerce, and restoring Rhodes and its dependencies to their ancient flourishing state. He weighed the resources of these beautiful islands and found them great. Rhodes, 120 miles in circumference, was almost everywhere fertile; its mountains abounded with fine timber, and the islanders possessed in perfection the art of building with it vessels of astonishing rapidity. Syme furnished its excellent wines and sponges in inexhaustible quantities;—Leros its fine marbles;—Cos, which is about seventy miles in circumference, its wines and delicious fruits of all sorts in the greatest plenty;—and every other island contributed something that was useful, or might be exchanged for other produce, or the manufactures of Europe. Several fine sea-ports existed among the Sporades, and the islanders were universally good sailors. The Grand Master very wisely made the port of Rhodes free and open to all nations. Many of the Christians who, since the loss of Palestine, had been living scattered through Greece, flocked to Rhodes, to settle there and enjoy the protection of the standard of St. John. Trade brought others who wholly or partially established themselves, and kept up a communication with the coasts of Asia Minor, Syria, Greece, and Italy; and out of this medley of knights and burgesses, foreigners and inhabitants, both of the Greek and Roman church, there arose, as Vertot observes, a new, warlike, and com-

mercial state, that soon became as powerful by its riches as it was formidable by the courage and valour of its sovereign Knights. The fame of these conquests and solid establishments soon spread in Europe, where they produced effects most favourable to the Knights; and, soon after, a large portion of the property of the Templars, who had been suppressed in 1312, was made over by the Pope and the European kings to the Order of St. John. This inheritance of the spoils of their old rivals and bitter enemies increased their pride even more than their wealth, which was now supplied by many streams.

Next to trade with friendly orthodox powers, the most enriching employment of the Knights was in privateering or cruising against Mohammedan vessels of all kinds, and against such ships or boats of the heterodox Greeks as were by them deemed to be piratical. Their vows bound them to perpetual war against the Turk, and the clearing the seas of pirates was a seemly addition to their holy duties; *only* it unfortunately happened that, as they made their own admiralty court and laws, they not unfrequently seized and condemned Greek vessels which were not fair prizes. Every knight was bound to make at least one cruise in the course of the year: these cruises, in the language of the Order, were called "caravans," a term constantly occurring in the history of the Hospitallers. On the summit of a mountain in the island of Syme, Fulk de Villaret had erected a lofty tower, whence ships could be discovered at a great distance. As soon as a strange sail was signalled, which was done by lighting fires at night, and making a dense smoke if by day, the pinks and light frigates of Syme, the row-boats and galleys of Rhodes, the feluccas and light and swift vessels of others of the islands, were got under weigh, and escape from so many pursuers became almost impossible. This mode of life was soon found to be altogether incompatible with the vows and discipline of the Order. Enriched by prize-money, and constantly excited by adventure, and rapid change of associates and scenes, the Knights commanding the squadrons lost all semblance of a monastic body. On their return from successful caravans, they gamed and drank, and indulged in other debaucheries, making the "religious city" of Rhodes look very like a profane Portsmouth or Plymouth in war-time. These excesses were followed by insubordination, jealousies, and dissensions. The Knights were in this state in 1321, when the Osmanli prince Orchan endeavoured to drive them out of Rhodes and the rest of the Sporades. The best of their ships were absent on caravans; but throwing themselves on board the galleys and merchant-vessels in port, and being aided by a small Genoese squadron, the Hospitallers, instead of awaiting the attack of the Turks on land, boldly put to sea with a very inferior force, and anticipating the enemy, thoroughly defeated him. On this as on many other occasions the Knights of St. John merited the name of naval heroes. In 1344 the squadrons of the Order, which now scoured as masters the whole of the western coast of Asia Minor, took the fort and part of the town of Smyrna from the Turks. They retained this footing on the Asiatic continent for fifty-six years, but did not extend their small territory there, which, however, was valuable as a trading mart, while it enabled them to put down the Turkish corsairs that used to infest the Gulf of Smyrna. When the Knights were dispossessed they had at least the honour of ceding to a great conqueror, for it was Tamerlane who took their Castle of Smyrna by storm in 1400. In the period included between 1344 and 1400 the Hospitallers had performed many exploits, and entertained projects of a truly gigantic ambition. In 1347 they went into Lesser Armenia, to defend the Christian king of that country against the Mohammedans; and at one time they are supposed to have

contemplated the re-establishment of the great kingdom of Armenia as an appanage to their Order. In 1355 they proposed the conquest of the Morea, and would have undertaken it but for the death of the Pope, who had gone into their views. Ten years later they aimed at sovereignty in Egypt; and with Peter I., the Christian king of Cyprus, they actually took Alexandria, which city, however, they were obliged to abandon in a few days. In 1376, when the Babylonish captivity of the Christian Church, as Petrarca called it, came to an end, and it was resolved that thenceforward the Popes should reside at Rome, and not at Avignon, the Grand Master, with the best of his galleys, had the honour of escorting Gregory XI. from the mouths of the Rhone to the mouth of the Tiber. During the same year, in conjunction with the Venetians, they took Patras, and in the year following, with the same allies, attempted the conquest of the whole of the Morea. There, however, they were very unsuccessful, and Juan Fernandez de Heredia was taken prisoner. In 1396 they joined the league of the Christian princes against Bajazet, and fought in the fatal battle of Nicopolis, where many of the Knights perished, and the Grand Master escaped with difficulty by throwing himself into a fishing-boat.

Some bold attempts to regain Palestine and maritime Syria seem to have failed through the Venetians, who played them false, and through the jealousies of the Christian powers generally. Retaining their maritime supremacy, the Knights continued to distress the Turks and Egyptians, until, at last, scarcely a vessel bearing a Mohammedan flag could put to sea without being seized and carried into Rhodes. Four times did the Mussulmans make prodigious efforts to dislodge the knights from the Sporades, and four times were they signally defeated by the intrepidity and superior skill of the Hospitallers. In one of these expeditions the Egyptians succeeded in landing on Rhodes 18,000 men, who, after a siege of forty days, were forced to re-embark. This was in 1444; but a far more memorable siege was one which the Order gallantly sustained for eighty-nine days in 1492, when the conquering arms of Mohammed II. were foiled and covered with disgrace. The Turks fleeing to their galleys with a host of wounded and dying, are said to have left 9000 dead before the strong and well-defended walls of Rhodes. During this siege the brave Master of the Order, Pierre d'Aubusson, received no fewer than five wounds. But this was the last great achievement of the knights during their possession of Rhodes. The Turks had become more and more formidable since their conquest of Constantinople, and in their Greek subjects, who hated the knights with a constant hatred, they found plenty of able seamen to conduct their fleets. When Sultan Solyman the Fourth, commonly called "The Magnificent," succeeded to the Osmanli Empire, at the end of 1520, he was a young man, vigorous and enterprising, and in the earliest days of his reign (a favourable omen in Turkish superstition) the conquest of Rhodes was determined upon, let it cost what blood it might. It was not, however, until June, 1522; that Solyman's tremendous armament appeared before Rhodes, and then indeed began a series of losses and sacrifices, which were followed by victory, but which rendered Rhodes the dearest conquest the Turks had ever made. Before beginning the siege, Solyman summoned the knights to surrender, and historians pretend to have preserved translations of the sultan's letter. "The continual robberies with which you molest our faithful subjects, (we quote from Vertot,) and the insolence you offer our majesty, oblige us to require you to deliver up to us immediately the island and fortress of Rhodes. If you do this readily, we swear by the God who made heaven and earth, by the six-and-twenty thousand prophets, and by our great prophet Mohammed, that you shall have full liberty to

go out of the island, and the inhabitants to remain there, without any injury: but, if you do not submit immediately to our commands, you shall all be cut to pieces with our terrible sword, and the towers, walls, and bastions of Rhodes shall be made level with the grass that grows at the foot of those fortifications."

To this summons the knights would give no reply save such "as should be spoken by the mouths of their cannon*."

The force of the Turks was undoubtedly great, but in Asiatic armies there are always numerous hordes that cannot be considered as soldiers, and the total of 150,000 men was probably exaggerated by the Christians, who set down their own force at no more than 600 knights, 5000 regular troops, and some companies of militia raised on the island among both Greeks and Latins. But in the course of two centuries the Knights of St. John had rendered the town of Rhodes one of the strongest places in the world. In the words of an old writer, it was "compassed with a most strong double wall, and wide and deep trenches; it had thirteen stately towers, and five mighty bulwarks," in addition to all which there were many natural advantages. When the Turks, after thirteen days of hesitation and inaction, began to fire upon the fortress, the Knights took up their positions according to their nations, or the "languages," into which they were divided by the Order. Extending from the French tower stood the French, with the lilies of France in their banners,—thence to St. George's Gate lay the stout Germans, with the eagle in their ensigns,—from the Gate of St. George frowned the English,—after them came the Spaniards and the Knights of Auvergne,—then the Italians, in valour not inferior to any of the rest;—and L'Isle Adam, the aged but active and heroic Grand Master, quitting his palace, took post hard by the church of "St. Mary of Victory," whence he could best succour any point that should be hard pressed by the infidels.

Nothing could be more unsuccessful than the first operations of the besiegers. The Knights destroyed their works, overturned their artillery with the cannons on the walls, and then, by sudden sorties, cut many hundred Turks to pieces in the trenches they were digging. The assailants were discouraged, the Pashas in command confused, and but for the arrival of Sultan Solyman himself with a reinforcement, which is stated as high as 15,000 men, the Turks, who had suffered tremendous losses, must have retired. Even after the arrival of the sultan, who forced his men to the deadly breach, and threw away human life without calculation or compunction, the siege proceeded very slowly, and the most determined resistance was made by the Knights at every point. The first bulwark blown up was the English, but four successive times did the brave warriors who defended it drive the Turks back from the breach, and tear down the Mussulman flag they had planted there. When the siege had lasted four months, many persons within the town proposed that the Knights should capitulate; but old L'Isle Adam, who seemed determined to be buried under the falling walls, would not listen to them; and though neglected and abandoned by all Christendom, and left to his own limited resources, he actually made good his defence for two months longer; and even then, when his gunpowder and provisions were alike exhausted, obtained an honourable capitulation, with permission to retire with his surviving Knights whithersoever he might choose. Between the killed and wounded, and those who died of fevers and contagious disorders, the Turks are said to have lost upwards of 100,000 men during the six months' siege of Rhodes.

* Knolles's 'History of the Turks.' This old writer's version of the sultan's letter does not differ materially from that given by Vertot, but he has fourscore thousand prophets, in lieu of six-and-twenty thousand.

There was a sort of barbaric grandeur, mixed with magnanimity, and now and then a gleam of gentle feeling, in Sultan Solyman. When he entered the city of Rhodes as a conqueror, he paid a respectful visit to the vanquished Grand Master, and touched by his misfortunes, his resignation and his age, he said to his officers, on quitting L'Isle Adam, "It is not without pain that I force this Christian, at his time of life, to leave his dwelling."

ORIGINAL COLONIZATION OF CANADA, BY FRANCIS I.

(From Sharon Turner's 'History of Henry VIII.')

As Canada is now become the most important relic of our North American possessions, and is daily increasing in its population, property, and commercial relations, and was first colonized in the reign of Henry VIII., it may gratify the reader to peruse the original instructions for the earliest settlement that was made upon it, from the European branch of the human race, as they were either dictated or approved by Francis I.

This region was existing unknown to all the other parts of the globe, until the year 1508, when some Norman and Breton adventurers, seeking their fortune at sea, under one John Denys, of Normandy, accidentally roved near it. They did little more than inspect some of its coasts, but it became afterwards known to several of their countrymen, who went to fish near its shores, and whose reports about it at last interested Francis I. to desire that it should be more specially examined.

With this view, in the year 1534, he sent Jacques Cartier Malouin, to reconnoitre the country, inspect its havens and ports, and by sailing up the great river which flowed from it, to learn all that he could collect of its soil, climate, and inhabitants. Cartier executed his commission with satisfactory diligence, and the information which he communicated on his return determined the French king to establish a colony in the country, near its principal river, now called St. Lawrence, which is the largest stream of water in North America. This important river was then termed CANADA by the natives, and its name became transferred to the country itself, though it was afterwards also called New France.

His expensive wars with the emperor prevented Francis I. from pursuing his plan of colonizing Canada till the year 1538. But having at last agreed with Charles V. to establish a general truce between them for ten years, from the 18th June 1538, he proceeded three months afterwards to the accomplishment of his colonial enterprise, and it is in the September of this year that the following official document occurs, for the outfit of the expedition to establish the first settlement in this territory of North America, which has now become such an important member of the foreign dominions of Great Britain.

"Memoir of the Men and Provisions necessary for the Vessels which the King intends to send into Canada."

"To perform the voyage which the king our sovereign lord desires to have made to Canada, it must go, at the latest, in the middle of May, and must have the number of persons and ships hereinafter mentioned, to be increased or lessened as M. Le Connetable (the prime minister) shall think proper.

"It will be requisite to have, as well for guarding the ships that will remain there, as for the equipment of several boats which will be wanted to go into the various streams and rivers, 120 mariners.

"Also forty men of war; harquebuziers.

"Also thirty carpenters, as well of ships as of houses, and sawyers who work lengthways.

"Ten master masons, who can be assisted by those of the country who will serve them.

"Three men who can make lime.

"Three makers of tiles.

"Two coalmen to make charcoal.

"Four master farriers, each having a forge and two servants, with two locksmiths.

"Four smiths, to search and ascertain if there be any mine of iron, and to make forges and work iron there.

"To take, at least, six vine-dressers and six labourers.

"Three barbers, and each a servant.

"Two apothecaries, with each a servant, to examine and see the useful qualities of the herbs.

"A physician and a servant.

"Two goldsmiths who are lapidaries, with their necessary utensils, and each a servant.

"Two master tailors and two master hosiers, and each a servant.

"Two joiners and two servants, with their tools.

"Two master rope-makers and two servants, because there is hemp to make cordage.

"Four cannoneers at least, and the men-of-war will make use of these when need requires.

"Six churchmen, with all things necessary for divine service; in all 276 men.

"To be victualled for two years at least; that if the ships which shall be sent there next year should not arrive, those now going may not want food.

"These victuals must be well made, and so good as to last all this time; and there must be some of the dry wines of Spain.

"These victuals may cost ten sols a month for each man, which, for the 276 men for 24 months, will amount to 33,120 livres.

"They must also be furnished with clothes, beds, coverings, and all other necessaries for two or three years; and they must leave some money behind for their wives and children;

"Therefore they must be paid in advance for fifteen or sixteen months, and this will cost at least, one with the other, 100 sols a-month.

"Ten tons of iron, which will cost fifty livres.

"Eight or ten prises of salt, as well for the people of the country, who very much value it, as for those of the ships. This will cost in Brittany sixty sols for each prise.

"Four milliers yards of common linen, as well for the natives as for the ships.

"Three hundred pieces of crezeaus for natives and ships.

"Also millstones, to make water-mills, wind-mills, and hand-mills.

"They must also carry out as many as possible of all manner and kinds of domestic beasts and birds, as well to do the work as to breed in the country; and all sorts of grains and seeds.

"For their passage there must be at least six ships, of not less than 110 tons, with two barks of 45 or 50 tons each; these, with the smallest of the six ships, will remain there, and the other five will return as soon as they have landed the victuals and goods. For the return of these five, each must have twenty men over and above the aforesaid number. They may take in going and coming, and in staying there, five or six months, for which time they must be victualled; and be paid two months on going out and the remainder on their return.

"There must be munitions of war to land for the forts; artillery arquebuzes a croc, pikes, halberts, lead, balls, powder, and other things.

"In the ships must be three boats, ready to put out when there, to go out on the streams and rivers.

"All sorts of nail-work, pitch, and tar for the ships.

"The six ships, being from 700 to 800 tons, will cost a crown per ton a month, for moleage; or about 900 crowns a month, and for the six months 4900 crowns.

"There must be also provided pay and victuals for 100 men, to bring back the shipping this year, who may be detained six months; which would amount to 1000 livres a month, and therefore for the six months 6000 livres.

"Made the . . . September, 1538."

I derive this curious paper from the collection of state letters made by Ribier in 1666, and addressed by him to Colbert, the celebrated minister of Louis XIV. This counsellor of state describes Canada as then "a vast country, uncultivated like a desert, and in most places uninhabited, except by demons and wild beasts."

It was in 1540 that this colonizing expedition reached Canada, under the Sieur de Roberval, and in 1543 another fleet under his superintendence was sent to it, by the same intelligent monarch, Francis I., who seems not to have suffered either of his contemporaries, Charles V. or Henry VIII., to have surpassed him in his encouragement to every laudable undertaking which the intellect and spirit of the day were inclined to pursue.

* * * The Office of the Society for the Diffusion of Useful Knowledge is at 59, Lincoln's Inn Fields.

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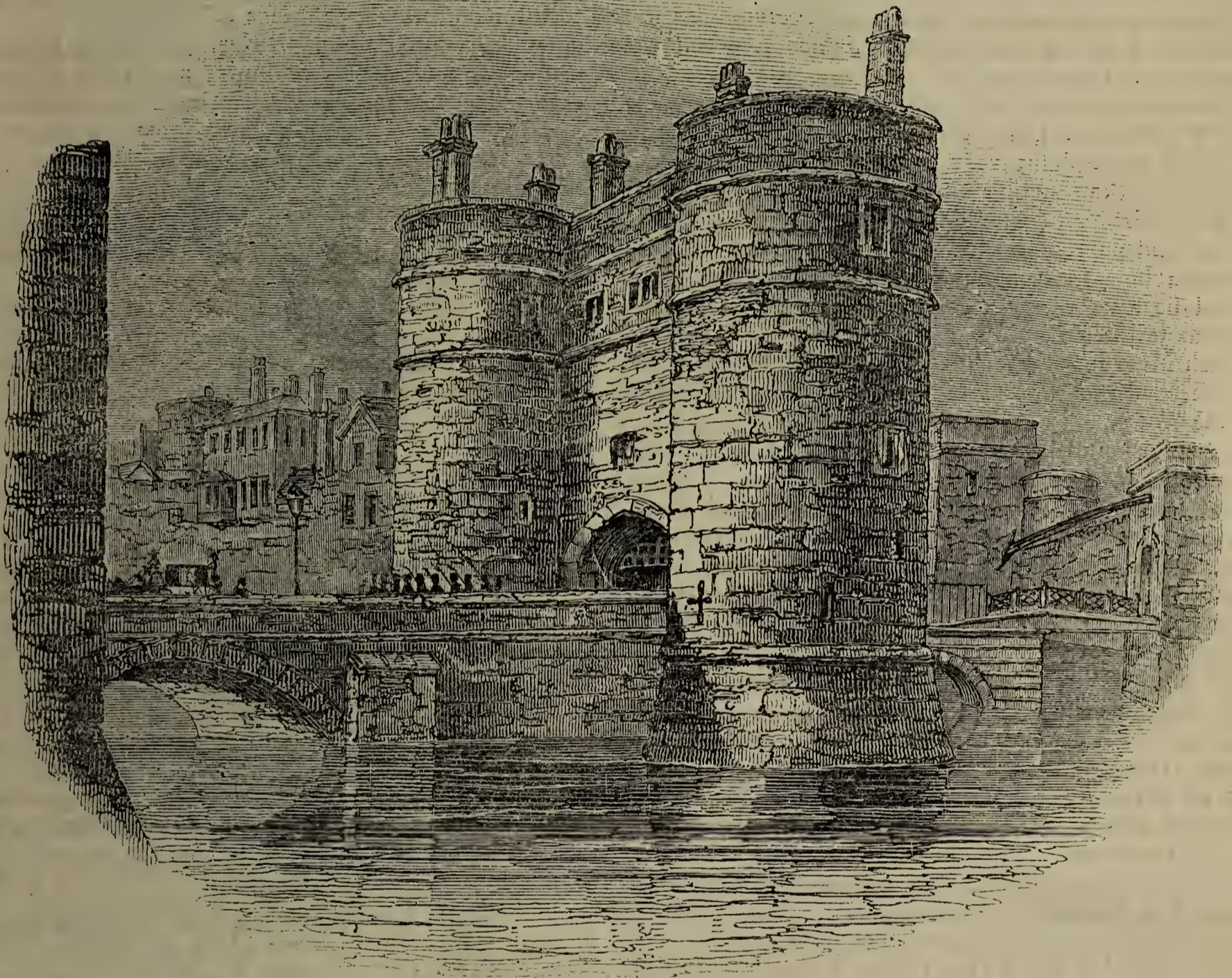
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272.]

May 31 to June 30, 1836.

THE TOWER OF LONDON.—No. I.



[Byward Tower and Stone Bridge, with Drawbridge leading to the Wharf.]

THE series of buildings termed the Tower of London occupies an extensive area to the east of the city, on the north bank of the Thames. The following description, though the terms in which it is conveyed are not rigidly exact, may convey a general idea of the form of the Tower:—

The area may be termed a circle, which is described by a wide and spacious ditch, or moat, running round the walls, and the river. The centre of this circle is occupied by the most conspicuous and the most ancient portion of the Tower, the citadel or keep, which was the original Tower of London, and was occupied as the royal palace. This is a massive quadrangular building, having a turret at each angle rising considerably above the roof. It is termed the White Tower. The White Tower stands in the centre, or nearly so, of a square or inclosure, called the Inner Ward; the buildings composing which are appropriated to the Ordnance Office, the ancient and modern armouries, store-houses, resident governor's house, &c. The Inner Ward is encircled by the Outer Ward, a narrow street, or rather

lane, running round the Tower, which is appropriated to offices, residences, barracks, &c., and in which are several public-houses. The walls have cannon mounted at the embrasures. "Within the walls is comprised a superficies of twelve acres and five roods. The exterior circumference of the ditch measures 330 yards, independently of its sloping banks; and, on the side of Tower Hill, its width is at the top from thirty to forty-two yards: on the side next the river, from which it is separated by a spacious raised wharf, or platform, its width is from forty to fifty yards*."

The principal entrance into the Tower is at the west angle, through a series of gates (four in number) leading through an inclosure, and over a stone bridge thrown across the ditch, or moat. Two of these gates,

* Britton and Brayley's 'Memoirs of the Tower,' p. 211. This book, which is an octavo volume of nearly 400 pages, along with the larger and more elaborate work of Mr. Bayley ('History of the Tower,' 2 vols. 4to.), form the chief authorities from which the present account is taken. The latter work is the basis of all other subsequent accounts of the Tower. Some assistance will be derived from Meyrick's 'Critical Inquiry into Ancient Armour.'

the third and fourth, are flanked by round towers. The wood-cut at the head of this article represents the bridge and fourth gateway, which is termed the Byward Tower. The little drawbridge conducts across the ditch, through two gateways, to the wharf on the Thames. At the east end of this wharf there is a gate which gives egress from the Tower, from which circumstance the lower part of the Outer Ward and the wharf is in considerable use as a thoroughfare.

At the principal entrance to the Tower, on the west, there were formerly, as we are told by Mr. Bayley, considerable outworks, which were enclosed by a small moat, forming what is termed a barbican, or barbacan. This was the post of an advanced guard, where a porter was stationed to keep "watch and ward," and to announce in due form all state arrivals; and where strangers were detained until their business was made known to the governor. These feudal ceremonies were observed down to the reign of James I., when they gradually fell into disuse.

Before proceeding further to describe the Tower, it is desirable to advert, not in a querulous or an invidious spirit, to a complaint very generally made. In doing so we have the sanction of Mr. Bayley's example, who, in his 'History of the Tower,' speaks of the matter in strong and pointed terms. Without entering into the question how far the taste and habits of the people would be affected by throwing open our national collections to their inspection, in the same way as at the British Museum or the National Gallery, it will at least be conceded that, if any part of such an establishment as the Tower is to be exhibited for money, the fees of admission should be moderate. The price of admission to see the Tower collections is six shillings! This is a heavy tax on a working man, who might wish to give his family the enjoyment of a rational pleasure by a visit to the Tower. Besides, the money is paid, not for seeing the Tower, but the collections contained in modern buildings. The keep, or citadel, formerly the palace; the church, or chapel, where repose many of the illustrious unfortunates whose names are connected with the Tower history; the Beauchamp tower, on the walls of which are still preserved a number of inscriptions, written to beguile the sad hours of imprisonment, are all closed against the general visitor. The regalia, or crown jewels, which are contained in a small tower at the north-east angle of the Inner Ward, were first exhibited to the public during the reign of Charles II., which was permitted in order to make up deficiencies in the emoluments of the keeper of the regalia, which had been reduced. But a visit to the Tower was a recreation much earlier than that period. Whatever had been given, however, to the servants or attendants was merely a gratuity, at the discretion of the visitor, which was always thankfully accepted. After the serious duties of the warders, in guarding prisoners, &c., had become greatly diminished, they betook themselves to the more pleasant task of acting as guides, or "ciceroni;" and at last, though at a comparatively recent period, the gratuity was changed into a fixed and compulsory payment, the exacting of which has been ever since tacitly permitted by the authorities.

Paul Hentzner, a German, who visited England towards the latter part of the reign of Queen Elizabeth, in 1598, has left the following description of it at that time:—

"Upon entering the Tower of London, we were obliged to leave our swords at the gate, and deliver them to the guard. When we were introduced we were shown above a hundred pieces of arras belonging to the crown, made of gold, silver, and silk; several saddles covered with velvet of different colours; an immense quantity of bed furniture, such as canopies and the like, some of them most richly ornamented

with pearl; some royal dresses, so extremely magnificent as to raise any one's admiration at the sums they must have cost. We were next led to the armoury, in which are these particularities: spears out of which you may shoot; shields that will give fire four times; a great many rich halberds, commonly called partisans, with which the guard defend the royal person in battle, some lances covered with red and green velvet, and the suit of armour of King Henry VIII.; many and very beautiful arms, as well for men as for horse-fights; the lance of Charles Brandon, Duke of Suffolk, three spans thick—[this, Dr. Meyrick says, was a bourdonnass, or hollow lance]; two pieces of cannon, the one fires three, the other seven balls at a time; two others made of wood, which the English had at the siege of Boulogne in France; and by this stratagem, without which they could not have succeeded, they struck a terror as at the appearance of artillery, and the town was surrendered upon articles. Nineteen cannons of a thicker make than ordinary, and in a room apart thirty-six of a smaller; other cannons for chain shot, and balls proper to bring down masts of ships; cross bows, bows and arrows, of which to this day the English make great use in their exercises. But who can relate all that is to be seen here? Eight or nine men employed by the year are scarce sufficient to keep all the arms bright.

"The mint for coining money is in the Tower. N.B. It is to be noted that when any of the nobility are sent hither, on the charge of high crimes, punishable with death, such as murder, &c., they seldom or never recover their liberty. Here was beheaded Anna Bolen, wife of King Henry VIII., and lies buried in the chapel, but without any inscription; and Queen Elizabeth was kept prisoner here by her sister Queen Mary, at whose death she was enlarged, and by right called to the throne.

"On coming out of the Tower we were led to a small house close by, where are kept variety of creatures, viz., three lionesses, one lion of great size, called Edward VI., from his having been born in that reign; a tiger, a lynx; a wolf, excessively old: this is a very scarce animal in England, so that their sheep and cattle stray about in great numbers without any danger, though without anybody to keep them: there is, besides, a porcupine and an eagle: all these creatures are kept in a remote place, fitted up for the purpose with wooden lattices, at the queen's expense.

"Near to this Tower is a large open space: on the highest part of it [Tower Hill] is erected a wooden scaffold, for the execution of noble criminals; upon which, they say, three princes of England, the last of their families, have been beheaded for high treason. On the Thames close by are a great many cannon, such chiefly as are used at sea*."

From the mention of the menagerie in Paul Hentzner's 'Visit to the Tower,' we may here introduce an account of it, as that grand attraction of the visitors is now completely removed. The common phrase made use of by tourists of "seeing the lions" of a place, doubtless originated from the practice of visiting the wild animals formerly kept in the Tower. "In the barbarous ages," says the author of the 1st Volume of the 'Menageries,' in the 'Library of Entertaining Knowledge,' "beasts of prey were considered the especial property of kings, as something typical of their power and greatness. In the fortress where the crown of our ancient monarchs was kept were also confined their lions. These were generally maintained at the expense of the people, and sometimes of the civic officers of London, by special writ; and the keeper of the lions was a person of rank attached to the court. Gradually

* Paul Hentzner's 'Journey into England' in the year 1598.

this exertion of the royal prerogative fell into decay; and if a foreign potentate presented a tiger or a leopard to the king, as was often the case with the rulers of the maritime states of Africa, the animal was given to the keeper of the menagerie to add to his stock of attractions for the public. Further, no care was taken of the collection on the part of the sovereign or the government."

The first notice of a royal menagerie in England places this establishment at Woodstock, where King Henry I. had a collection of lions, leopards, and other strange beasts. Three leopards were presented to Henry III. by the Emperor Frederick II., himself a zoologist of no mean rank. From Woodstock they were transferred to the Tower; and numerous orders, issued in this and the succeeding reigns to the sheriffs of London and of the counties of Bedford and Buckingham to provide for the maintenance of the animals and their keepers, are extant among the records. Thus in the year 1252 the sheriffs of London were commanded to pay fourpence a day for the maintenance of a white bear; and in the following year to provide a muzzle and chain to hold the said bear while fishing or washing himself in the river Thames. In 1256 they were directed to build a house in the Tower for an elephant which had been presented to the king by Louis, King of France, which house is directed to be "forty feet long and twenty feet deep;" and a second writ occurs in which they were ordered to provide necessaries for him and his keepers. From various orders during the reigns of Edward I., II., and III., we learn that the allowance for each lion or leopard was sixpence a day, and the wages of their keeper three halfpence. At later periods the office of keeper of the lions was held by some person of quality about the king, with a fee of sixpence a day for himself, and the same for every lion or leopard under his charge. On these terms it was granted by King Henry VI., first to Robert Mansfield, Esq., marshall of his hall, and afterwards to Thomas Rookes, his dapifer. It was not unfrequently held by the lieutenant or constable of the Tower himself, on the condition of his providing a sufficient deputy. There was also another office in the royal household somewhat resembling this in name, that of master guider, and ruler of the king's bears and apes; but the latter animals appear to have been kept solely for the royal "game and pleasure." During all this period, and even almost down to our own times, the common phrase of "seeing the lions" in the Tower appears to have been almost literally correct, for we seldom hear of any other animals confined there than lions or leopards. Howel tells us in his 'Londinopolis,' published in 1657, that there were then six lions in the Tower, and makes no allusion to any other animals as being at that time contained in it. In 1708 some improvement had taken place; for there were then, according to Strype, no fewer than eleven lions, two leopards or tigers (the worthy historian, it seems, knew not which), three eagles, two owls, two cats of the mountain, and a jackal. Maitland gives a much larger catalogue as existing there in 1754; and this is still further extended in a little pamphlet, entitled 'An Historical Description of the Tower and its Curiosities,' published in 1774.

The preceding account of the Tower menagerie is taken from a very beautiful work published in 1829, which contains descriptions and spirited engravings of upwards of sixty different beasts, birds, and reptiles, then in the collection. During the latter part of the eighteenth and early part of the present century, that increasing half-kind of knowledge which sees its deficiencies, and yet is ashamed to acknowledge them, made it be regarded as an amusement fit only for children to visit "the lions" in the Tower.

During the busy time of the war also government had enough on its hands, without thinking of the Tower menagerie. In the year 1822, the entire collection consisted of a grizzly bear, an elephant, and one or two birds. At that time Mr. Alfred Cops was appointed keeper of the lions; and that gentleman laboured assiduously to bring up the collection to the improved state of zoological information. The book to which we have referred, 'The Tower Menagerie,' is a fine and beautiful testimony to his abilities and industry. But the establishment of the Zoological Society's Gardens in Regent's Park—an era in the history of zoology in Britain—and the removal of the menagerie at Exeter Change to the Surrey Zoological Gardens, obviated any necessity that might be pleaded for maintaining the Tower menagerie. It has therefore been altogether superseded.

To the removal of the menagerie might be added the removal of the ancient armouries and other curiosities to the British Museum. They scarcely perform the legitimate purpose of their preservation where they now are; and since the transfer of the Mint from within the Tower to the new and splendid building on Tower Hill, the royal fortress has lost nearly all its distinctive marks. Its old terrors as a state-prison are now dead; and with the exception of being still the repository of the regalia and the records, it is become merely an arsenal and a garrison. As an arsenal it is the most important in the empire, being the headquarters from whence issues the direction of all military stores: but for every other purpose which it now serves, the remaining offices within it might be removed, and the site given up to the encroaching demands of a busy commerce. Its vicinity to the bustle and traffic of the city and river detracts greatly from the picturesque effect of the Tower, though to the reflective observer it teaches a lesson worth infinitely more than mere picturesque effect. The contrast speaks of the mighty change that has passed over society. From the river, however, the view is very fine. And on all sides the citadel, or keep, with its four turrets, are seen rising above the mass of buildings which envelop them. But on the north-west side, next to the city, the walls appear to have built on them a number of mean-looking structures, which give to the Tower, from this point of view, the appearance of being a congeries of buildings brought together without much regard to method or order. On the other side the lofty massive warehouses of St. Katherine's Docks seem almost to overtop the fortress. "Everywhere," says an eloquent writer, "in and about this ancient abode of royal state, neglect has taken place of admiration, vulgar industry has come in the room of courtly sport, and in many instances squalor has usurped the old inheritance of splendour. Even here, however, there is a lesson which is cheering as well as moral:—the place where plots were aforetime hatched, as well against the safety of the kings of England as against the liberties and lives of their subjects—where patriotism has been immured from the light of the sun—and where blood, too pure and ardent in its love of man for the age, has been spilt, is now devoted to the peaceful, the exhilarating and the enriching labours of commerce. Royalty has sped westward, and all that is called fashionable in life has followed; but old father Thames still sweeps along by the Tower, and the burden of his every wave is provision to a thousand of the human race. The great may shift their places of abode, and alter the forms of their observances; but wheresoever Nature places the grand elements of utility, thither will mankind throng and prosper."

It has been contended that the Tower of London is of Roman origin. The controversy, which is of an antiquarian nature, need not be introduced here. Mr.

Bayley is decidedly of opinion that there is no evidence whatever for such a conclusion; and Messrs. Britton and Brayley go no farther than supposing that the site might have been occupied by the Romans as a station for a military encampment or fortress. They say, "That the Londinium of the Romans was at once a fortress, a fort, and a municipium, is attested by the best-informed historians and antiquaries; and that the site of the present Tower would be the most likely spot to be chosen for a place of defence, is deducible from its situation. It is a tract of land gently raised above the river, the Essex marshes, and those on the opposite side of the Thames, where a fortification was afterwards formed by the Saxons, and called South-Wark."

Whether the Romans occupied the site or not, it is certain that the foundation of the present Tower is subsequent to the Norman conquest. Gray the poet speaks of the "Towers of Julius," and other writers have designated the White Tower as Julius Cæsar's Tower; but in a survey, in order to the repair of the Tower generally, made in 1532, and now existing in the Chapter House at Westminster, though the name is used, yet the ground plans of the fortress of the time of Elizabeth and Charles II. show, that what was then, and is now, called the Salt Tower, was the building so denominated. Mr. Bayley says that no historian whose authority can be relied on furnishes us with the slightest ground for supposing that any fortification of importance ever did exist here until the erection of the citadel or keep, called the White Tower. This was built by command of the Conqueror, under the superintendence of a celebrated military architect, Gundulph, Bishop of Rochester. Whether any other buildings than this central tower or keep were erected in the time of William I. does not appear. It is probable that it was surrounded by some exterior defences. The buildings having been injured by a tempest about the year 1092, repairs and additional fortifications were begun by William Rufus, which were carried forward by Henry I. But the ditch or moat was not thrown round the Tower till nearly a century afterwards. This is stated to have been done by Longchamp, bishop of Ely, who had been appointed Regent during the absence of Richard I. on his crusade. Longchamp is stated to have "enclosed the Tower and Castell of London with an outward wall of stone, imbattailed, and also caused a deepe ditch to be cast about the same."

But the creator of the Tower as a palace was, undoubtedly, Henry III. He bestowed great labour and expense in adorning the interior and extending the fortifications. Two successive similar accidents occurred to the walls and gates which he erected. When first erected they fell down, and were destroyed; and on being reconstructed met with a similar disaster. This was in 1240 and 1241. The cause of these accidents was probably the defective nature of the foundations. The citizens, who regarded the Tower with a jealous eye, and were suspicious of everything done to it, as indicating the power of the sovereign and their weakness, rejoiced at this repeated destruction. Popular belief ascribed the accidents to the interference of Thomas à Becket, the reputed guardian of the city, who was supposed to have risen from his grave for the purpose. The accidents have also been ascribed to earthquakes, though without any appearance of probability. Henry resided in the Tower during a large portion of his troubled reign. "Indeed, to him," says Mr. Bayley, "the Tower owed much of the splendour and importance which it possessed in early ages; and to his time may be ascribed the erection of some of the most interesting of the buildings that are now extant. The records of that era, which abound with curious entries, evincing Henry's great and constant zeal for the promotion of the fine arts, contain many interesting orders which he

gave for works of that kind to be executed in different parts of the Tower. The royal chapels there, as well as the great hall and the king's chamber of state, are subjects of frequent and curious mention."

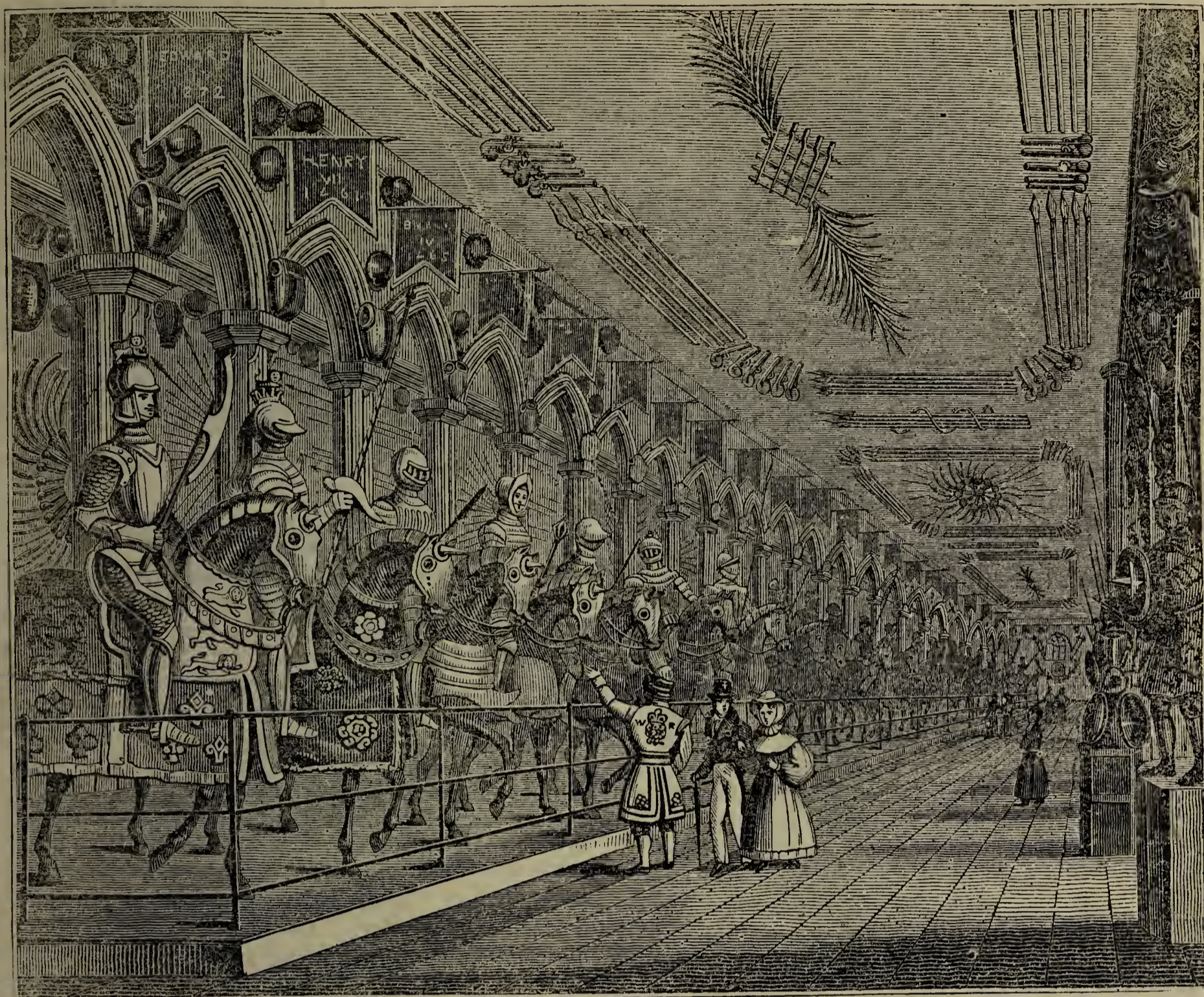
The last additions to the Tower considered to be of any importance were made by Edward I. Whatever has been subsequently done has consisted of repairs and re-edifications.

By the time of Henry VIII. the Tower had been falling into disuse as a royal residence, being only used on state occasions and at intervals of alarm. As a state prison, however, it rose into a horrid celebrity during Henry's reign, which character was tolerably well sustained during the reigns of his two daughters, and of those of the Stuarts. The old ceremonies of holding a court in the Tower, and proceeding in state through the city to Westminster previous to a coronation, were kept up, with some variations, till the reign of James II., when they were finally omitted. All the domestic apartments in the palace were taken down during James's reign, and that of William and Mary.

But in every reign great attention was paid to keeping the Tower in a state of repair. Various surveys and reports were made, describing its existing state and condition at the time, and pointing out the repairs which were requisite to be done. On the junction of the two kingdoms under James I. the rising spirit of commerce began to fill the port of London, and encroachments were made on the Tower precincts. By a report made in 1620, it appears that the Tower, which is set forth as having been fortified not only within the walls, ditches, and wharf, but care also taken in the Minories for the lodging of the principal officers, had, through the evil example and toleration of some lieutenants, been much encroached upon; whereby the limits of the Tower, and of those other habitations and store-houses appointed for the public use, were perverted to private profit, "the splendour and magnificence of the said royal castle being by that means defaced, and the place itself, as it were, besieged in the wharf, ditches, and liberties thereof." Various alterations took place at this and subsequent times, for the purpose of remedying evils which were complained of.

Towards the end of the eighteenth century the Tower had been greatly neglected; the ditch was choked and looked like a stagnant pool, and the fortifications were out of repair. But in 1792, in consequence of apprehensions which were entertained, great exertions were made to put it into a suitable state of defence; the ditch was cleared out, and the water once more admitted to flow in from the Thames; flood-gates were constructed, and the walls and parapet of the counterscarp were repaired. It is now kept in a clean and efficient state, and though, from the number of old houses within it, and on the walls or parapet, it could not stand a modern cannonading with the destructive engines now employed, which would reduce it to ruin in an hour or two, it must have been a place of considerable strength formerly; and even now it could withstand an irregular assault. The visitor who has not seen a fortified city may regard the Tower as a representation of one in miniature.

Of the buildings of the Tower, as they now stand, the White Tower is, as already mentioned, the most conspicuous, and the most ancient. It stands nearly in the centre of the inner ward. It is "a massive quadrangular structure, measuring 116 feet from north to south, and 96 feet east and west; its height is 92 feet; and at the south-east end is a semicircular projection of about 22 feet. The summit of the walls is embattled, and at each angle is an elevated turret rising considerably above the roof; that at the north-east angle, which is the highest and largest, forms an irregular circle, projecting considerably from the main walls, and



[Interior of the Horse Armoury.]

containing the great staircase of communication throughout the building. This turret was formerly called the Observatory, it having been used for astronomical purposes by the celebrated Flamsteed, in Charles II.'s reign, before the erection of the Royal Observatory at Greenwich*."

"The exterior," says Mr. Bayley, speaking of the White Tower, "has undergone so many repairs, that it is now difficult to trace any part of its primitive character: the windows, particularly those belonging to the two lower stories, have been greatly increased in dimensions, and the surface has been so generally coated with a mixture of flints, mortar, rubble work, and modern masonry, as to leave but little of the original mode of construction visible. In some parts, however, of the south and east sides, just above the projecting base or splay, two courses of beautiful well-squared stone are occasionally met with, laid in beds of mortar, composed of lime and sea-sand, containing shells and small pieces of flint, and forming a joint of about three-quarters of an inch in thickness; but whether this finished masonry was continued higher or not, is now difficult to determine, though from some detached fragments, which are to be seen in other parts of the building, at different elevations, it is rendered extremely probable that all, or a great portion, of the exterior facing was of a similar nature." To this extract Messrs. Britton and Brayley append the following observation: "In support of this opinion, we may state, that it was a very common practice in the Norman times to face exterior walls with small pieces of squared stone."

The designation by which this building has been long known, namely, the White Tower, is conjectured, with

considerable appearance of probability, to have arisen from an ancient practice of whitening over the exterior walls. In a mandate of the year 1241, issued by Henry III., which is still extant, the practice of whitening the walls is twice alluded to.

The White Tower, though constituting, in fact, the original Tower of London, and having been the royal residence, is not open to the inspection of the general visitor. Under the basement floor are capacious vaults; the interior consists of three lofty stories, divided longitudinally, from the base to the summit, by a wall seven feet in thickness. The first or basement floor over the vaults, besides two spacious rooms, used as store-houses, contains a singular apartment, which appears to have been originally intended for a prison. It occupies the south-east corner of the floor; the walls were sixteen feet thick; light was admitted by four narrow loop-holes, which are now, however, widened to the extent of four feet. In this dungeon it is traditionally, but not authentically, stated that Sir Walter Raleigh was confined, and that it was here he wrote his celebrated 'History of the World.' The great majority of the state prisoners were not confined in the White Tower, but in a tower at the north-west side of the inner ward, now used as the mess-room of the officers of the garrison, and also in other towers round the inner ward. But prisoners were confined in the dungeon on the basement floor of the White Tower during the reign of Queen Mary, as is evident from the remains of inscriptions written on the walls.

The communication between the basement floor and the first story of the White Tower is chiefly by a spacious staircase within the circular part of the north-east extremity of the building, the vaulting of which appears to have been constructed in the same manner as the

* Britton and Brayley's 'Memoirs of the Tower,' p. 243.

dungeon or prison. On the first floor is a chapel, in a very bold style of Norman architecture, which is now appropriated as a repository for records. This chapel is directly over the prison on the basement floor, and occupies the entire space from the first story to the roof. It is supposed to have been anciently used for the private devotions of the royal family when residing here, but it is uncertain when it was first appropriated to its present use. It is known to have been a repository for records as early as Charles II.'s time. It is not likely, as has been remarked, that its dilapidation would have been suffered as long as the fortress remained a royal residence.

"In point of division, the uppermost story exactly corresponds with those beneath it; but the rooms are much loftier, and, from the originality of their appearance, excite a greater degree of interest. In that called the Council Chamber (which is the largest apartment, and reputed to be the place where councils were assembled when the reigning monarch held his court in the Tower), the roof is sustained by vast beams of timber, disposed in transverse and horizontal framework, and supported by two rows of transverse posts. This arrangement has every appearance of high antiquity, and harmonizes exceedingly well with the grand and substantial features of the other parts of the building. The eastern wall is pierced by five lofty openings, with semicircular arches, but without ornament or moulding of any kind, which communicate with the adjoining room: one of these is partly closed with a thin partition, in which is a smaller opening, equally plain, and assimilating in character to the arch over it. It was at a council sitting in this chamber that, as traditionally affirmed, the Protector Gloucester ordered Lord Hastings to be led to instant execution, and commanded the arrest of the Archbishop of York, the Bishop of Ely, and Lord Stanley.

"The whole of this floor is now annexed to the Record Office, the largest apartment having been so appropriated at the instance of Mr. Lysons, the late keeper of the records, in 1811. Additional light has been admitted into both apartments by the insertion of windows in the roof*."

The entire White Tower may be termed a storehouse, one portion being reserved for armouries, containing many thousand stands of arms, the other portion being used as a Record store. The military stores comprise gunpowder, armourers' tools, small arms, cavalry and nautical weapons, suits of armour, &c.

The south and north sides of the enclosure in which the White Tower stands are formed by two extended and handsome brick ranges of buildings; the south range being the Ordnance Office, the north range the Grand Storehouse, or repository of modern military weapons, principally of small arms ready for use. The pediment over the main entrance of the latter is adorned with sculptured royal arms and trophies, designed by the famous Grinling Gibbons. At the north-west extremity of the pavement in front of the Grand Storehouse is the church, or chapel, of the Tower, which was erected in the time of Edward I. It is supposed to occupy the site of a chapel still more ancient. It is a low edifice, void of all ornament, without buttress or battlement, but having a small tower at the west end, surmounted by a bell-turret. The dimensions of this church are sixty-six feet in length, fifty-four in breadth, and twenty-four from the floor to the roof. The chief interest of the chapel arises from its being the resting-place of many illustrious persons, who either died in the Tower, or were decapitated on Tower Hill.

Here lie Gerald Fitzgerald, ninth Earl of Kildare,

and Lord Deputy of Ireland—the representative of one of the bravest and proudest of the Anglo-Hibernian families—who being committed to the Tower on a charge of treason, died of a broken heart; Anne Boleyn, the unfortunate, and Katherine Howard, the guilty wife, of Henry VIII., with several of their friends and relations; Thomas Cromwell, the instrument, favourite, and victim of Henry; the Duke of Somerset, Northumberland, and Lady Jane Grey, with her husband; the Duke of Norfolk, who was beheaded for aspiring to the hand of Mary, queen of Scots; his son the Earl of Arundel; the brave but rash favourite of Elizabeth, the Earl of Essex; and, amongst others, three of the Scotch lords who suffered for the rebellion of 1745.

This chapel was subjected to the episcopal authority of the Bishop of London by Edward VI., which was confirmed by Queen Mary.

Under James I. the right of the chaplain of the Tower to perform the ceremonies of marriage and baptism was questioned, but the right has been since fully recognized and established.

The advowson belongs to the crown, and the chaplain receives from the Exchequer a yearly salary of 115*l.* 5*s.*

The armouries in the Tower may be described as three: the "Horse Armoury," "Queen Elizabeth's Armoury," and the "Small-arms Armoury," in which are piled immense stores of small arms ready for immediate issue. The two first armouries are repositories of ancient weapons and armour kept for exhibition—the third not merely for exhibition, but use.

A few years ago the state of indiscriminate confusion in which the collection of ancient weapons and armour was exhibited, and the startling names and uses which were assigned them, was a subject of regret or ridicule to intelligent persons. Dr. Meyrick, in his work on 'Ancient Armour,' which was published in 1824, called public attention to it; and on his representations government accepted his offer of gratuitously arranging the collection in historical order. A building was erected in 1825 for the purpose of containing the equestrian figures. The improvement which has been introduced into the ancient armouries has in some measure been extended to the guide-book which is sold to visitors at the Tower. But the spectator is still told, *viva voce*, a few of the old strange stories, which perhaps habit has rendered too familiar to be easily forgotten.

The wood-cut given in the present Number represents the interior of the "Horse Armoury." A reference to it will convey a clearer idea of the contents and arrangement of this collection than a mere verbal description. Before the year 1825 this armoury was a mass of confusion. Armour of the fifteenth and sixteenth centuries was placed on figures, to which the names of historical characters of the eleventh and twelfth centuries were assigned. On the representations of Dr. Meyrick, made personally, and in his 'Critical Inquiry into Ancient Armour,' (3 vols. 4to., 1824,) the attention of government was drawn to the subject; and as that gentleman kindly offered to take the trouble of placing the entire collection in chronological and historical order, arrangements were made for the purpose. A new building was erected in 1825, to contain the "Horse Armoury." This was constructed from the designs and under the superintendence of Mr. Wright, clerk of the Works to the Board of Ordnance. It is a one-storied building, erected along the south side of the White Tower. The interior of the building is an apartment 149 feet in length, and 33 in width. It is divided into two unequal parts or walks, the equestrian figures occupying the centre. In front of the equestrian figures are a number of figures intended to represent men at arms, bowmen, pikemen, &c., along with a variety of weapons and armour

* 'Memoirs of the Tower,' p. 253.

Behind is a quantity of armour and weapons, of different ages, but principally of the fifteenth, sixteenth, and seventeenth centuries, along with a number of figures, neatly and tastefully arranged. The whole collection is exceedingly interesting, and is probably one of the finest armouries in Europe.

The origin of collections of this nature is thus described by Dr. Meyrick:—"The several armouries of Europe seem to have first taken their form in the sixteenth century. The emperors Maximilian I. and Charles V., and the kings Henry VIII. and Francis I. are the monarchs to whom the foundation of these collections is to be attributed, and who lived in the last age of chivalric splendour. The consequence is, that although in private families a few suits of earlier date had been preserved in Italy, that of Maximilian, with its steel camboys, and that of Henry VII. resembling it, are the oldest specimens in Germany and England. When, however, these collections were formed, the names of warriors, long antecedent, were given to them; and as at that time chronology of costume was never attended to like the paintings of the day, they were readily taken as faithful representations. Hence the Ambras collection now at Vienna, though containing armour of the same period as the suits in the Tower, has, equally with this, been asserted to possess specimens of antiquity*."

The commencement of the collection of royal and equestrian figures in the "Horse Armoury" was in 1686, when Gibbons, the well-known sculptor, carved two, intended to represent the two Charleses. The collection gradually accumulated; and being intended merely for a show, the figures were clothed in pieces of armour taken from the Tower stores at random, and were named as whim or fancy dictated. The arrangement which is now made renders the collection a study.

Only twelve out of the entire number of suits of armour in this collection can be positively identified. The others were made up by Dr. Meyrick, from his knowledge or supposition of the style or fashion of the age. Over each figure is a banner, on which the name assigned to the figure, and the presumed date, are inscribed. We copy the list from Messrs. Britton and Brayley, as it shows how they have been made up:—

"1272. Edward I., King of England, in the act of sheathing his sword. The hauberk, hood, sleeves, and chausses of the armour, although not actually of this period, have been fabricated from portions of ancient chain mail. On the surcoat, by which the hauberk is partially concealed, and on the shield, are depicted the royal arms.

"1450. King Henry VI., in plate armour, of peculiar workmanship; the back and breast-plates being flexible. The sleeves and skirt are of mail; the *sollerets*, or coverings for the feet, are pointed: the gauntlets are tastefully formed and wrought. In the right hand, the figure holds a weapon, formerly shown, in the small armoury, as the *Lochaber-axe* with which Colonel Gardiner was killed at the battle of Preston Pans; but in reality it is a general's pole-axe, of German workmanship, and of the same date as the armour. The saddle, which is of bone-work, bearing a German inscription, is particularly curious: the caparisons are of velvet, embroidered with the arms of France and England.

"1465. King Edward IV., in an iron-studded tilting suit, consisting of back and breast-plate, burgonet helmet, guard for the bridle-arm, gauntlets, *jambieres*, or coverings for the legs, and slipper stirrups with ancle guards. The lance is modern, but its vam-plate, of a prior age, is exceedingly curious. The housing of the

horse is of black velvet, powdered with the king's badges; namely, the white rose and the sun.

"1508. King Henry VII., in a suit of fluted steel, probably of German manufacture, consisting of a burgonet helmet, with open *mentoniere*, or chin-piece, and visor; globular breast-plate, with *placate* and back-plate; tasses, or skirts; *garde de reine*; vam-braces and rear-braces, connected by elbow pieces; *genouillieres*, or armour for the knees, with demi-cuisses affixed; *jambieres* and *sollerets*. The horse is accoutred in the *manefaire*, *chanfron* with ear-pieces, *poitral* and *croupiere*; war-saddle, with burr and cantel, faced with steel.

"1509. King Henry VIII., in a tilting helmet, with rising beavor and visor; a pouldron for the left shoulder, with shifting pass-guard gorget; breast-plate, with *placate*; back-plate, vam-brace, and rear-brace, with shifting elbow-caps; fixed gauntlet for the sword hand, and tilting gauntlet on the bridle hand; tassets, demi-cuisses with *genouillieres*; *jambieres* to the ancle, and *sollerets*. In the right hand is a *martel de fer*, and, on the left side, an arming sword. This suit is richly inlaid with gold. The horse wears a *chanfron*, with spiral spike, *manefaire*, *poitral*, and *croupiere*, in three pieces. The bow and cantel of the war-saddle are faced with steel, and the stirrups are richly engraved. This is the first of the suits of armour which has been positively identified. The others, of known appropriation, will be marked by asterisks.

"1520. Charles Brandon, Duke of Suffolk, in plate armour, very similar to that last described.

"1535. Edward Clinton, Earl of Lincoln, in a richly-gilt suit, formerly shewn as that of King George the Second. This exhibits little variation from the two preceding suits.

"1552. King Edward VI., in russet armour, richly-embossed and gilt, formerly shown by the warders as that of Edward the Black Prince. This is an exquisite specimen of art.

"1555. Francis Hastings, Earl of Huntingdon, in a suit of plate armour, richly gilt, in slashes.

"1560. Robert Dudley, Earl of Leicester. The armour of this nobleman, as stated by Dr. Meyrick, was formerly kept in the tilt-yard, and there exhibited on particular days. On different parts of it are engraved the initials R. D., the collar of the garter, the figure of Saint Michael, and the Earl's badge, the ragged staff. It appears to have been originally gilt.

"1570. Sir Henry Lee, Master of the Armouries, and Champion to Queen Elizabeth, in a plain suit, formerly attributed to William the Conqueror.

"1585. Robert Devereux, Earl of Essex, in armour richly engraved and inlaid with gold. It was worn by the Champion of England at the Coronation of King George the Second. In the right hand of the figure is a Maltese sword, of curious workmanship.

"1605. King James I., in a plain suit, formerly shown as that of Henry IV. He holds, in a perpendicular direction, a tilting-lance, fourteen feet in length, and, in the thickest part, two feet three inches in circumference, used for running at the ring.

"1606. Sir Horace Vere, Captain-General, holding in his right hand a small mace.

"1608. Thomas Howard, Earl of Arundel. This figure, also, is armed with a mace.

"1612. Henry, Prince of Wales, son of King James I. The armour is richly gilt, and engraven with representations of battles, sieges, and other military subjects. A steel mace is suspended from the saddle bow, and a Toledo sword rests on the right stirrup.

"1618. George Villiers, Duke of Buckingham, in plain armour, formerly shown as that of Henry the

* Meyrick, *Critical Inquiry into Ancient Armour*, vol. iii, 125.

Sixth. The figure is grasping a wheel-lock petronel, the stock of which is of ebony, inlaid with ivory and mother-of-pearl.

"1620. Charles, Prince of Wales, when, apparently, about twelve years of age. The armour is richly-engraved and gilt.

"1635. Thomas Wentworth, Earl of Strafford. The only peculiarity in this suit is, that it descends no lower than the knees, armour for the legs having been about that time discontinued.

"1640. King Charles I. The armour, which is curiously wrought, and entirely gilt, was presented to him, when Prince of Wales, by the City of London.

"1685. King James II. His dress consists of a drab-coloured coat, with covered buttons and silver lace, which partially covers a waistcoat of bright blue velvet. His only defensive armour is a cuirass, a long gauntlet, and a helmet, the grating of which represents the royal arms, and also bears the letters I. R. II. The saddle, holsters, &c. are of velvet, richly-embroidered with gold lace; the pistols, which the latter contain, are curiously inlaid with silver and ivory. This figure stands in advance of the platform, against the eastern wall."

It would have been better, when this collection was reformed by Dr. Meyrick, if the old practice of giving names to the figures had been abandoned. The majority of the visitors are apt to consider them as "lively effigies" of the historical characters whose names they bear, instead of regarding them as representations of the fashion of the panoply of a knight or warrior of the age to which they are referred. This objection is partly obviated in those figures which are clothed in armour known to have belonged to the individuals: but anything which tends to degrade the collection into a mere show runs counter to what should be its prime object.

The armour worn by the Normans was a defensive dress made of small minute iron rings, joined together, so as to resemble, at a distance, a clothing of net-work. Of this ringed or chain-mail Dr. Meyrick had not met with any perfect specimen when he arranged the collection in its present form. There has been since obtained, however, a suit of this chain-mail, which is supposed to be of the age of Stephen, and, consequently, upwards of 700 years old. If the authenticity of this suit is ascertained with any degree of probability, it is perhaps the only perfect specimen extant of the age to which it is referred. It is placed on a figure intended to represent a "Norman Crusader on horseback," and it is certainly one of the most curious objects in the room.

This chain-mail, though uncouth and clumsy, was calculated to preserve the wearer from the projectiles then in common use—the arrow sent home by the force of the arm, or the stone propelled by the sling. But as improvements were made in destructive engines, the chain-mail gave place to the scale-armour, and this again to the massive cumbrous pieces of plate-armour with which the warriors of a later date sheltered themselves from the arrow projected by the cross-bow, or from the murderous blow of the battle-axe. An example of the scale and plate armour may be seen on the first figure in the wood-cut, to which the date of 1272 is given. This, with the exception of the suit of chain-mail, is the oldest in the collection: it is made up from old pieces of armour.

From 1272 there is a transition of nearly two centuries. The next figure has the date 1450 assigned to it, with the name of Henry VI. It is in plate armour of peculiar workmanship.

There are but fifteen years of difference between this and the adjoining figure, to which the name of Ed-

ward IV., and the date of 1465, are given. The remaining figures all belong to the sixteenth century, "the last age of chivalric splendour," and the seventeenth, when armour was worn more for show than use, and towards the latter part of which the "fashion" disappeared. A second equestrian figure wearing a suit of armour, which is positively identified as having belonged to Henry VIII., is placed in a recess in the wall, in front of the range of equestrian figures. It is clothed in a curious suit of armour, which was presented to Henry by the emperor Maximilian I., on Henry's marriage with Katharine of Aragon. This is the most splendid in the collection. It is washed with silver, and covered with engravings.

In this recess are also placed two small figures, each accoutred in armour known to have belonged to the young princes represented, Henry and Charles, sons of James I. Over the figure of Henry VIII. is a Latin inscription, purporting that in the reign of George IV., the Duke of Wellington being Master of the Ordnance, the collection was historically arranged by Dr. Meyrick. To this the date 1826 is affixed.

The figures on foot in front of the equestrian range represent—a foot soldier of 1540 in dark armour; a swordsman of 1506 in half-armour, with a puckered velvet skirt; a pikeman of the time of Charles I. in brown armour, studded with brass nails; and an archer of the year 1590. This figure is attired in a brigandine jacket, or doublet, containing pieces of iron, and curiously quilted; sleeves and skirts of green, long hose, and square-toed shoes. In the right hand is a bow, and on the same side a quiver of arrows.

In the rear of the equestrian figures, on a raised platform within a recess, which occupies nearly three-fourths of the length of the building, is placed a great variety of arms and armour, tastefully disposed. A large portion of it is composed of the armour, weapons, and ensigns used in the civil war in the time of Charles I. There are also figures of Knights of Malta, and a representation of St. George and the Dragon, as the guide-book says, "nearly as large as life," and exhibiting the saint "in the very act of killing the dragon with a spear." The body of the dragon, and a bed of rushes on which it is supposed to be crouching, are composed of sword-blades.

It is to be regretted that this collection is not placed where the visiter, if he wished it, could leisurely and repeatedly examine it. A mere sight of the collection is surely not the object in view in its preservation, for that conveys no information. An ingenious person making himself acquainted with the nature and uses of the arms and armour used in former periods would find his study of history greatly aided; while to the artist and mechanic an examination of the progress of the art of the armourer in different periods would prove, if not beneficial, at least interesting. The necessity of being attended by a warder, and the sum paid for a sight of the armouries, is an effectual barrier. Few will willingly pay a second time for a hasty and unsatisfactory inspection. The consequence is, that the visitors are composed mostly, if not entirely, of people from the country who visit London, especially in the summer, and to whom the Tower is one of the sights of the metropolis; and of foreigners who cannot be thereby influenced in favour of our taste or generosity.

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OBERHASLI.



[Pass of Oberhasli.]

THE valley of Oberhasli is nearly in the centre of Switzerland, in the canton of Berne, and adjoining the cantons of Unterwalden and Uri. From its eastern extremity to the lake of Brientz, it is about thirty miles in length, bounded on each side by lofty mountains. The valley terminates in a plain of some extent, at the end where the lake is situated. The Jungfrau, the Aarhorn, and Mount St. Gothard, are not many miles distant. The valley is watered by the Aar, which is formed by two streams that have their source not more than a mile from the sources of the Rhone. The Aar traverses great part of Switzerland, passing through the valley of Oberhasli into the lakes of Brientz and Thun, where it becomes navigable. Numerous cataracts pour down the sides of the valley and swell the volume of the Aar. One of them, formed by the Reichenbach, a considerable stream, falls down steep declivities in which it has perforated singular channels for its course. A black sediment is deposited by some of these mountain-torrents, which is used as manure. The natural beauties of this portion of Switzerland attract many visitors, whose disbursements form a source of considerable advantage to the inhabitants. M. Simond speaks with great admiration of the rich and smiling landscapes to be met with in the vale of Hasli. He

VOL. V.

adds that it is highly cultivated, full of villages and scattered dwellings half hid in trees. It is sheltered from the north winds; and several descriptions of shrubs and fruit trees, which do not grow in some other parts of Switzerland, are here flourishing and productive. About 14,000 head of cattle are supported in the meadows and Alpine pastures. The exports consist of cattle, cheese, and skins of the chamois and other animals, which are exchanged for corn, wine, salt, manufactured goods, and colonial produce.

Oberhasli forms a bailliage, under the jurisdiction of an officer chosen from among the inhabitants and appointed by the authorities of Berne. The population amounts to about 6000, and the valley is subdivided into three parishes. The chief town of the valley is Meyringen, which contains 600 inhabitants.

The inhabitants of Oberhasli are considered to be good specimens of a fine peasantry. They are remarkable for their superior language and manners, their open countenances, their strength, activity and manly proportions, which are calculated to impress travellers in their favour, though it may be observed that in these respects they have been made the subject of somewhat exaggerated statements. The personal appearance of the women is good, and their natural attractions are

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increased by a simple and elegant costume. Instances of great longevity are frequent, and may be attributed to the sobriety of habits generally prevalent, as well as to the purity of the air. Gymnastic exercises take place twice in the summer, to which those who reside in the neighbouring valleys are invited. According to an old tradition, the inhabitants are the descendants of a colony of Swedes, who established themselves in the valley about the fifth century. The probability of this fact is strongly corroborated by the familiar use of several terms evidently of Swedish origin. The castle of Hasli, which stands on an eminence near Meyringen, is said to have formerly been the residence of one of the first Swedish inhabitants. Before the French revolution, many privileges were enjoyed by the population, for which they were indebted to their voluntary union with the Bernese, in 1334.

The eastern extremity of the valley is divided in two, and in each branch there is a stream, which flows into the Aar. One of these subdivisions of the larger valley affords the only practicable route from the Oberland to Italy by the Grimsel. This is the pass of Oberhasli represented in the cut. M. Simond mentions a curious fact connected with the Grimsel, in one of the caverns of which a prodigious quantity of the largest crystals ever known was discovered in 1720. He states that some of these crystals weighed from 400 lbs. to 800 lbs., the value of the whole was estimated at 30,000 florins (about 2400*l.*) The largest of these crystals, measuring three feet and a half, by two feet and a quarter, is in the Cabinet of Natural History in the Garden of Plants at Paris.

One account of the valley of Oberhasli, which we have consulted, states that the population has doubled in the last 100 years, but this increase does not appear to have been attended with any change in the modes of existence, or extension of previous resources; and the consequence has been, that a portion of the population has been driven elsewhere to seek a livelihood, and the armies and workshops of Europe have thus been recruited. The cause of the constant emigration from Switzerland may be explained in the following manner:—"It is the nature of pasturage to produce food for a much greater number of people than it can employ. In countries strictly pastoral, therefore, many persons will be idle, or at most be very inadequately occupied. When a father has more than one son, those who are not wanted on the farm are powerfully tempted to enrol themselves as soldiers, or to emigrate in some other way, as the only chance of enabling them to marry." The following additional remarks serve still further to elucidate the social condition of the population in those parts of Switzerland which are exclusively pastoral or agricultural:—"There are no grounds less susceptible of improvement than mountainous pastures. They must necessarily be left chiefly to nature; and when they have been adequately stocked with cattle, little more can be done. The great difficulty in Switzerland, as in Norway, is to procure a sufficient quantity of fodder for the winter support of the cattle which have been fed on the mountains in the summer. For this purpose grass is collected with the greatest care. In places inaccessible to cattle, the peasant sometimes makes hay with crampons on his feet; in some places grass not three inches high is cut three times a year; and in the valleys, the fields are seen shaven as close as a bowling-green, and all the inequalities clipped as with a pair of scissors. In Switzerland the art of mowing seems to be carried to its highest pitch of perfection. As, however, the improvement of the lands in the valleys must depend principally upon the manure arising from the stock, it is evident that the quantity of hay, and the number of cattle will be mutually limited by each other; and as the population will of course be

limited by the produce of the stock, it does not seem possible to increase it beyond a certain point, and that at no great distance."

The extension of manufactures in Switzerland during the war encouraged an increase of the population, and manufactured goods being exchanged for corn, the arable lands were, to a great extent, laid down in grass. On the return of peace, each country endeavoured, by prohibitions, to sustain the prosperity of its own manufactures. The result, though unfavourable to all, has not been so to each in an equal degree. The landlords, no longer having so free a market for their produce, have suffered in some cases; in others, manufacturers have been confined to the home-market, and the means of employment being diminished, the land has been burdened with the support of a part of the manufacturing population. This state of things has been severely felt in Switzerland, which stands in need of importations of corn, while the prohibitory system restrains the exportation of manufactures in exchange, and thus injures both the agricultural and manufacturing interests. Many of the Swiss peasantry have emigrated with their families to the United States. They usually embark at Havre; but if they proceeded down the Rhine to Rotterdam by the steam-boats, the expense and fatigue of so long an inland journey would be much diminished, though, at the same time, the chance of obtaining an early passage across the Atlantic would not be so great as at Havre.

The inhabitants of the mountainous regions, in every part of Europe, are necessarily frequently impelled to emigrate, if not to other countries, at least to other districts, and if not to settle there, at least to seek for employment at particular seasons. In the north of Derbyshire, for instance, where the crops are late in ripening, great numbers participate in the labours of the harvest in the adjoining counties, where it takes place earlier; and by this means they are enabled to avoid that inequality of condition to which the nature of the soil at home would condemn them if dependent upon it alone. In the following lines from Wordsworth's 'Excursion' the circumstances and feelings which occasion the migration from a poor and mountainous country to one more favoured are touched upon:—

"Among the hills of Athol he was born:
Where, on a small hereditary farm,
An unproductive slip of rugged ground,
His parents, with their numerous offspring, dwelt;
A virtuous household, though exceeding poor!"

* * * * *
That stern yet kindly Spirit, who constrains
The Savoyard to quit his naked rocks,
The free-born Swiss to leave his narrow vales,
(Spirit attach'd to regions mountainous
Like their own stedfast clouds) did now impel
His restless mind to look abroad with hope."

LICENSE TO EAT FLESH.

At an early period of Christianity, a custom prevailed among many Christians of joining abstinence to prayer. This was at first authorized by no public law, nor were those considered criminal who neglected its observance. After a time, fixed days of fasting were gradually introduced, but it is by no means certain what those days originally were, or whether they were so regarded in the first century; though some persons are of opinion that even in the time of the apostles, or soon afterwards, Wednesdays and Fridays were observed as fasts; the former because our Lord was on that day betrayed by Judas, and on the latter crucified by the Jews. In the third century the merit of fasting was highly estimated, and it was held to be of indispensable necessity, from an idea that the demons directed their stratagems principally against those who pampered themselves

with delicious fare; and fasting was also considered a most efficacious means of appeasing an offended Deity. As fasting became more prevalent, its strictness was relaxed, and a mere abstinence from flesh and wine was deemed sufficient, and thus, in the time of catholicism in this country, fish was the general food twice a week—in Lent—and on certain other fast-days,—a particular reverence being attached to the fast on Fridays, which was most rigidly observed, from respect to our Saviour's passion. That the reverence paid to the Friday fast was not confined to this country appears from a passage in Boccaccio. At the Reformation, the practice of eating fish on particular days was discontinued, and consequently a vast number of fishermen were deprived of their employment and ruined. To remedy this evil, an act of parliament was passed in the fifth year of the reign of Queen Elizabeth, (cap. 5) "For the benefit and commodity of this realm to grow as well in maintenance of the navy as in sparing an increase of flesh victual in this realm." By this statute it was enacted that "every Wednesday in every week through the whole year, which heretofore hath not, by the laws or customs of this realm, been used and observed as a fish-day, and which shall not happen to fall in Christmas week or Easter week, shall be hereafter observed and kept as the *Saturdays* in every week be or ought to be: and that no manner of person shall eat any flesh on the same day, otherwise than ought to be upon the common Saturday." It then proceeds to enact that it should not be lawful for any person to eat flesh on any days observed as fish-days, upon pain of forfeiting 3*l.* for every offence, or suffering three months' imprisonment. This statute also provided that persons might obtain licenses to eat flesh by payment of the following sums per annum to the poor men's box of the parish, viz.:—a lord of parliament, 1*l.* 6*s.* 8*d.*; a knight, 13*s.* 4*d.*; any other person, 6*s.* 8*d.*; but these licenses were not to authorize the eating of beef at any time, nor of veal from Michaelmas to May Day. It was further provided, that sick persons might have a license to eat flesh, during the time of their illness, from the bishop of the diocese, or the parson, vicar, or curate of the parish; but if this latter license was granted to any person "other than such as appear to have need thereof by reason of their sickness, the license was to be void, and the parson who granted it fined five marks;" and the statute goes on to recite, "And because no manner of person shall misjudge of the intent of this estatute, limiting orders to eat fish, and to forbear eating of flesh, but that the same is purposely intended and meant politickly for the increase of fishermen and mariners, and repairing of port-towns and navigation, and not for any superstition to be maintained in the choice of meats.

"Be it enacted, That whosoever shall, by preaching, teaching, writing, or open speech, notify that any eating of fish or forbearing of flesh, mentioned in this statute, is of any necessity for the saving of the soul of man, or that it is the service of God otherwise than as other politick laws are and be: that then such persons shall be punished as spreaders of false news are and ought to be."

The following is a copy of a license to eat flesh in time of sickness:—

"Whereas M^r. Richard Young, of Okeborne St. George, in the countye of Wiltes, Esquire, is a Gent., of good age, subiect to many sicknesses, diverse infirmities, and in bodey of a very weake constitution, and hath with him in his house his mother, M^{rs}. Ann Young, widdowe, a Gent. of great age (above foure score), very sicklye, feeble, and subiect to diuerse maladies; and haveing others in his house sicke, and so have long bine, to whome fish, by reason of their age, sicknesses, and diuerse infirmities, is iudged by the skilfull (as I

am informed) to be very hurtfull to their bodies, and likelye to breede and bring diuerse diseases and sicknesses upon them. They therefore haue requeste me, their minister, the promises considered, to give and grant them license, this time of Lent, to eate flesh, for the better avoidinge of sicknesses and diseases which, by their wholye absteyneing fro flesh, might growe upon them: know ye therefore that I, Adam Blithe, Mr. of Artes, and of Okeborne aforesaid Viccar, duelye considering this their so lawfull request, and tendering the helth and wellfare of the said M^r. Richard Young and M^{rs}. Ann Young, his naturall and aged mother, have given and granted, and by these presents do give and grant to the said M^r. Richard Young and M^{rs}. Ann Young, and to ffoure persons more, leave, power and license (so farr as in me lieth, and by lawe safely I may without danger, and no further,) to dresse, or cause to be dressed, for them to eate, flesh this time of Lent nowe following, prohibitinge neuer the lesse, and by this grant forbiddinge them, all manner of shamblemeates whatsoever. In witness whereof, to this present license I have put to my hand and seale. Dated and given at my house in Okeborne aforesaid, ffebruarye this XIIIth., 1618,

"By me, ADAM BLITHE, the Viccar ibid."

Fuller (in his 'Worthies') deploras the abolition of fast-days, strongly reprovng its impolicy; he considered that the fishermen ought to be encouraged by the state, not merely for their own sakes, but for the benefit of the naval service of the country. "Some," he says, "suspect as if there were a pope in the belly of every fish, and some bones of superstition in them, which would choak a conscientious person, especially if fasting-dayes be observed. But know that such customs grew from a treble root of Popery, Piety, and Policy, and though the first of these be plucked up, the other must be watered and maintained, and statesmen may be mortified and wise without being superstitious."

To this cause Fuller attributes the decay of many towns on the north-east sea, as Hartlepool, Whitby, Bridlington, Scarborough, Wells, Cromer, Lowestoff, Aldborough, Orford, and generally all from Newcastle to Harwich, which formerly sent out yearly upwards of two hundred ships, "chiefly for the taking of ling, that noble fish, corival in his foule with the sirloin of beef at the tables of gentlemen." "Nor was it without good cause," says the same author, "why Wednesdays and Fridays were by them [our ancestors] appointed for fish-dayes; for our English fishermen in Kent, Sussex, Hampshire, &c., set forth on Monday, and catch their fish, which on Tuesday they send up to London, where on Wednesday it is sold and eaten. Again, such fishermen as returned on Tuesday set forth afresh on Wednesday to take fish, which on Thursday they send up to London to supply the remainder of the week." The foregoing method affords a striking contrast to the rapidity with which the metropolis is now supplied with fish, a rapidity, too, which the general adoption of railroads is likely to accelerate.

After the suppression of the Lent fast by the Puritans, a custom obtained of giving entertainments and suppers particularly on Fridays. Charles II. issued a proclamation for the revival of the fast, and prohibited victuallers from dressing suppers, and butchers from killing and selling meat on that day; but an office for granting licenses to eat flesh was allowed in St. Paul's churchyard. Saying grace, eating privately, and a small donation for the poor were enjoined to those persons to whom this privilege was granted.

COBHAM HALL, KENT.



[Cobham Hall.]

COBHAM is a parish in Kent, about five miles west of Rochester, which gave a name and a title to a family which, from the reign of King John to the accession of James I., was amongst the most eminent in the country. The village stands on rising ground nearly in the centre of the parish, and the church is on an eminence on the south side of it, from which there is an extensive view. It contains many interesting monuments of the family which had resided in the parish for so many generations; one of so early a date as 1354. In the middle of the chancel there is an altar-monument, on which are two full-length effigies, with several children around them, in a kneeling position. This monument was erected to the memory of George, Lord Cobham, who had been governor of Calais, and died in 1558, in the reign of Elizabeth. The church is rather a handsome structure. About fifty years ago a Mausoleum was erected in the park for the reception of members of the Darnley family. It is an elegant structure of the Doric order, of an octagonal form, and built of Portland stone. Cobham Hall and the grounds occupy the greater part of the parish. In 1367 one of the Cobham family obtained the grant of a weekly market to be held in the parish every Monday, but it has been long since discontinued. The number of inhabitants at the last census was 732.

The present hall is described by Hasted in his 'History of Kent,' as a noble and stately building, consisting of a centre and two wings; the former being the work of Inigo Jones, and the latter having been made uniform, cased with brick-work, sashed, and otherwise modernized, about fifty years ago. The park is extensive, but it was formerly much more so, and is finely interspersed with wood and stately trees. Some of the oaks are twenty feet and upwards in circumference, and Hasted mentions a chestnut-tree which was twenty-three feet in girth; and he states that the park had the reputation of producing venison of superior quality, and that the celebrity which it enjoyed was occasioned by

the peculiar excellence of the herbage. Queen Elizabeth and Charles II. both visited Cobham; the former, it is stated by Strype, was received with "great cheer."

In the fifteenth century the manor and estates of Cobham were in possession of Joan, granddaughter and heiress of John, Lord Cobham. She is said to have been married five times, and one of her husbands was Sir John Oldcastle, who assumed the title of Cobham. The freedom with which he was disposed to view spiritual matters drew down upon him the bitter spirit of persecution which distinguished the times of Henry V., during the second year of whose reign (1414) the statute against heretics was obtained. By this, the chancellor, judges, sheriffs, justices of the peace, and all who had any share in the administration of the law, were sworn to exert their whole labour and diligence to search and destroy all manner of heresies, errors, and Lollardies. Persons convicted of heresies were to forfeit all their possessions. Under the direction of Archbishop Chicheley, the bishops and superior clergy made diligent inquiries in parishes where persons suspected of heresy were supposed to dwell; and in order to remove, as far as possible, all grounds of suspicion, three respectable men were to swear whether they knew of any one differing in life and manners from others, or supporting error, or having suspicious books, and to denounce them. The Lollards at that period alarmed both the ecclesiastical and secular power. It is stated in Wilkin's 'Concilia' that at this period a book belonging to Sir John Oldcastle had been seized at the shop of a limner, with whom it had been left to be illuminated. This book was taken to the king, by whom it was read in Sir John's presence, and declared to contain heterodox opinions; and the king asked Sir John if he did not think so, to which he replied in a guarded manner, saying that he had not read two pages of the book. The clergy charged him with harbouring the Lollards and supporting their opinions;

but Sir John, who had been the intimate friend of the king in his younger days, and as Dr. Lingard alleges, the original of Sir John Falstaff, was protected from any process before the usual tribunals, in order that the efficacy of the royal efforts might be tried in inducing him to abandon his errors. These were unsuccessful, and the king, after upbraiding, proceeded to threaten, on which Sir John Oldcastle retired to his castle of Cowling, in Kent. The archbishop was ordered to proceed against him, and his virtue was put to such severe proof, that he was soon obliged to choose between safety at the expense of truth or martyrdom. The questions with which he was pursued having elicited grounds of conviction, he was declared guilty of heresy, and excommunicated. The primate procured for him a respite of fifty days, during which he escaped from the Tower. Immediately after his obtaining his liberty, an insurrection broke out, with which he is said to have been connected. In the proclamation issued by the king, it is declared that they (the Lollards) meant to destroy him, to confiscate the possessions of the church, to secularize the religious orders, to divide the realm into confederate districts, and to appoint Sir John Oldcastle president of the Commonwealth. It does not, however, appear to be satisfactorily proved, though occupying so conspicuous a part in the proclamation, that he was at all concerned in the insurrection. He contrived to elude his pursuers for more than two years. In 1616, after a feeble attempt made by the Lollards to disturb the country, which it is alleged drew Sir John Oldcastle from his retirement, he was taken prisoner after an obstinate resistance. He was arraigned before the peers, whose authority he refused to acknowledge, on the ground that Richard II. was alive in Scotland, and was sentenced to be hanged as a traitor and burned as a heretic. His widow kept possession of the estates, and died in 1433. From this period to 1596 the Cobham estates descended in lineal succession. In that year they came into possession of Henry Lord Cobham, who was Lord Warden of the Cinque Ports, and Constable of Dover Castle, Lord-Lieutenant of the County, and a Knight of the Garter. In 1603 this nobleman, with his brother and some others, was accused of having been engaged in Sir Walter Raleigh's conspiracy. They were brought to trial at Winchester, the plague then raging in London, charged with conspiring against the king's life, with a view to alter the established religion, subvert the government, and aid an invasion. They were found guilty, and judgment of death was pronounced against them. Lord Cobham's brother was executed, but the capital sentence was remitted in his own case; but being deprived of his estates, lived in great poverty until his death in 1619.

The Cobham estates by this means came into possession of the crown, and in 1612 James I. granted them to the Duke of Lennox, one of his own kinsmen. At the close of the seventeenth century, they were sold to enable the owner to pay off his debts. The annual rental of these estates is given in Hasted, and amounted to 3000*l.* per annum. The deer park, with the paddocks, containing as by survey 830 acres, was valued at 10*s.* per acre, the timber woods, &c. included. A farm of 416 acres, called Ranscombe farm, was valued at an annual rental of 7*s.* per acre. Platt's farm of 464 acres was valued at 4*s.* 6*d.* per acre; the woods in the out-park, 400 acres by estimation, at 5*s.* an acre. The total number of acres was 2345; rent per annum, 871*l.* 1*s.* 8*d.*, exclusive of the mansion, which cost 60,000*l.* building, and 14 acres of garden and orchard ground connected with it. In 1714 Cobham Hall and the estate came by marriage into possession of an Irish family of the name of Bligh, one of whom, in 1725, was created Earl of Darnley. It continues to be the seat of the Earls of Darnley. In 1362 a perpetual chantry or college was founded in the

church by the then Lord of Cobham. At the dissolution of religious establishments of this nature, it was re-founded, and the funds employed in providing a residence for twenty poor persons, with a quarter of an acre of land for each, and a small monthly stipend. The proprietor of Cobham Hall names one of the inmates of these houses, dignified with the name of a college, who is always the warden; the wardens of Rochester bridge nominate a second, and the neighbouring parishes select the rest of the inmates.

KNIGHTS OF MALTA.—No. IV.

THE small number of Knights who survived the murderous siege of Rhodes, with about 4000 soldiers and Catholic inhabitants of the island, embarked on board the ships belonging to the Order on the 1st of January, 1523. They were allowed to carry with them their archives and their relics of saints, such things being altogether valueless in the eyes of the Turkish conquerors. The Grand Master was the last to embark; and then, seeing all his faithful followers in safety, he gave the word, and the ships stood away from Rhodes, which he had so nobly defended, and where the Knights Hospitallers had reigned nearly two centuries. A dreadful tempest scattered this melancholy fleet, but the ships, one by one, found refuge in different ports of the neighbouring island of Candia (the ancient Crete), which then belonged to the Republic of Venice. From mixed motives of jealousy and selfishness, the Venetians had looked on with perfect indifference while the Turks were taking Rhodes, which island might be considered as a bulwark of Christianity—of their fair possessions in Candia, and the colonies of Venice in other parts of the Levant—and which in policy as well as in honour they ought to have succoured and assisted. Irritated at these recollections, L'Isle Adam made haste to quit Candia, prophesying what would be its fate from the spreading power of the Turks, and the want of union among Christians: this prediction was verified in the course of the following century, when Candia was taken, as Rhodes had been before it*.

Towards the end of April, the vessels of the Order, which had been again dispersed by storms, met, with one or two exceptions, in the port of Messina; and in the friendly island of Sicily, where the Knights had vast possessions, the Grand Master prepared his representations to the Pope and the great Christian sovereigns, whom he implored to appoint another island in the Mediterranean for the future residence of the Hospitallers, or (what was dearer to his heart) to aid him in the reconquest of Rhodes. The plague breaking out at Messina, L'Isle Adam went with his sadly-reduced fleet to the Bay of Naples, and after spending some time there, in the neighbourhood of the ancient city of Baia, he sailed to Civita Vecchia, on the Roman coast, whence he repaired by land to Rome. The Pope appointed the city of Viterbo as the temporary residence of the Knights, and allowed them to leave their ships in the port of Civita Vecchia.

The energy of the old Grand Master was badly seconded by pontiff and by princes, who were either lukewarm, or so absorbed by their own projects of aggrandisement in Europe, as not to have a thought to spare for an island under the shores of Asia. The great enterprise of retaking Rhodes was therefore given up, and after seven years of uncertainty, disappointment, and intrigue, the Hospitallers were fain to accept from the Emperor Charles V., Malta, with its dependent island Goza, and the town of Tripoli, on the Barbary coast.

* Candia was completely conquered, after a ten years' war, in 1669.

In September, 1530, the effects, titles, and servants of the Order, together with good store of arms, ammunition, and provisions were shipped for Malta; and on the 26th of October following, old L'Isle Adam landed at that singular island, where he was received with regal honours. Immediately upon his arrival, the Knights gave into his hands, in quality of their chief, all monarchical power, after which he took formal possession of the sovereignty of the island.

Malta was then in a state very different from the splendid condition in which the Knights left it in our own days. There was only one town in the island, called "Città Notabile" (now Città Vecchia), but which was a miserable, half-deserted place, partially surrounded by a mouldering wall;—there was only one fortress, named St. Angelo, and it was partly in ruins, while the whole of its artillery consisted of one small cannon, two falcons, and a few iron mortars. The entire population amounted only to 12,000, and these were poor and wretched, owing to the barrenness of the soil, and the frequent descents of the Barbary corsairs, who frequently carried off the inhabitants of the villages into slavery. There was a great deficiency both of wood and water, and for fuel all the poorer inhabitants used thistles or cow-dung dried in the sun. Against these disadvantages, however, there remained to be set off two spacious and excellent sea-ports, capable of sheltering the largest fleet, and numerous small bays or coves, well adapted for the lighter galleys and row-boats of the Order, which could be so stationed as to issue from all points. The smaller island of Goza, separated from Malta by a narrow channel, was much more fertile, the rocks, except where they were broken into cliffs above the sea, being covered nearly all over with good soil. It contained about 5000 inhabitants, who were dispersed in villages. The island was badly fortified, having nothing but a weak castle built on the top of a hill, towards which the natives ran at the approach of the Algerines or Tunisines.

Altogether this was but a bad exchange for the fertile and beautiful Rhodes with the rest of the Sporades, but money and energy soon made it an inexpugnable retreat; palaces and splendid towns began to rise up, and the geographical position of Malta was admirably suited to the Knights' cruises against the Turks and Barbary Moors. L'Isle Adam's first care was to strengthen the castle of St. Angelo, to build a church and an hospital. The galleys of the Order continued to be as successful as they had been at Rhodes. They surprised the city of Modon in the Morea, and carried from it an immense booty, in which we find enumerated 800 Turkish women and girls! The practice of the Knights did not differ from the reprobated one of the Moors and Turks, for they made slaves of all such of their Mussulman prisoners as were not ransomed by large sums of money or valuable goods, and the treatment their captives received was quite as harsh as that the Algerines meted out to their Christian prisoners. This was surely not christianlike, nor was it the way to put an end to such barbarous usages, but it accorded with the spirit and philosophy of the age. Not long after their pillage of Modon, the Knights, acting with the imperial fleet under the command of the celebrated Andrew Doria, stormed and took Coron, and, while the great Turkish fleet was away, cruising in the Archipelago, they had the boldness to propose with Doria, to force the Dardanelles and plunder Constantinople, which was in a very defenceless state, owing to the absence of the Sultan and his army, then engaged in Hungary. But for the Venetians, who refused to join it, there can be little doubt that this expedition would have succeeded, and that Doria and the Order would have repeated the exploit of "blind old Dandolo."

The Knights, however, had not been long at Malta,

when internal dissensions threatened the Order with utter ruin. A private quarrel arose between a Florentine and a French Knight of the language of Provence; in a duel, to which it led, the Italian killed the Frenchman, upon which the French Knights, pretending the Florentine had used foul play, fell upon him and his friends sword in hand. Retreating before superior numbers, the Italians took sanctuary in the palace of their patron, the Prior of Rome, but before they reached that place of safety several of them were sorely wounded. Maddened by this outrage, more than sixty Italian knights or laymen rushed out from the prior's residence, attacked the Knights of Provence, and soon provoked a general engagement with all the French "languages." To make the struggle about equal, the Knights of Aragon and Castile joined the Italians. Night fell on a scene of carnage, and the darkness of it was horribly illuminated by flashes of artillery and musketry. It was not without the greatest difficulty that the Grand Master put down this civil war. The vengeance he afterwards took of the leaders in this mad affray seems to have been sufficiently severe, for twelve knights were degraded and expelled, and many others (the number is nowhere mentioned) were put in sacks and thrown into the sea, after the fashion in which the Turks dispose of their unfaithful wives. These events, with other crosses, shook the health of the sturdy old L'Isle Adam; but what carried him to his grave is generally reported to have been the suppression of the Order in England, and the seizure of all their estates by Henry VIII. He died in August, 1534, and the Knights, not without reason, inscribed on his monument

Hic jacet Virtus victrix Fortunæ.

To describe all the exploits of the Knights of Malta would be to write a history of the maritime wars of the Mediterranean; for during more than a century they shared in nearly every great naval battle fought by the Christians against the Mohammedans. Their galleys accompanied the famed expeditions of the Emperor Charles V. to Algiers and Tunis; they made many descents on the African coast by themselves, and for many years the Knights, by keeping in check the Mohammedan corsairs, were of essential service to the Christian world.

The sultans of the Turks, so far from leaving their old enemies unmolested, made several desperate efforts to drive them out of Malta as they had been driven out of Rhodes. The most memorable of these efforts, which is generally called "The Great Siege of Malta," took place in 1565, when La Valette (a worthy successor to L'Isle Adam) was Grand Master of the Order, and Solyman the Magnificent, the conqueror of Rhodes, was still on the Turkish throne.

The Turkish fleet appeared off Malta on the 18th of May: it consisted of 159 vessels, as well galleys as galliots, having on board 30,000 land forces, Janizaries, and Spahis, all picked men: it was closely followed by many transports, which carried heavy artillery, the horses of the Spahis, more land troops, ammunition, and provisions. To oppose this force La Valette could only reckon upon 700 knights and 8500 soldiers; but the fortifications of Malta, though not perfect, were already excellent, and taking their posts upon them according to their languages, as they had done at Rhodes, the chivalry of Europe determined to defend them to the last. The Turks effected their landing at St. Thomas's Creek, sometimes called the Ladder Port. A swarm of the Barbarians separated from the main body to pillage in the country, and more than 1500 of them were cut to pieces by the Christian soldiery. The Grand Master at first permitted this fighting beyond the walls, in order to familiarize his men to the horrid

cries and the manner of firing of the Turks; but, husbanding his men, he soon put a stop to it, and kept close within the different fortresses.

On the 24th of May the Turkish artillery began to batter in breach. The first place attacked was fort St. Elmo, which defends the entrance into the great harbour on the west, as Fort Ricasoli defends it on the East. Eighty ten-pounders, two culverins, (sixty-pounders,) and a basilisk, carrying stone balls of a prodigious diameter, kept up a constant fire from the land-side, while sea-wards St. Elmo was battered by long culverins which did great mischief.

[To be concluded in our next.]

ON THE PRE-SENSATION WHICH ANIMALS HAVE OF CHANGES IN THE WEATHER.

THE sensations which take place in animal bodies before a change of weather, which animals express by various external appearances, and which may be called a "pre-sensation," seem however, to require considerable explanation. Aware that we can offer nothing on this subject that has not already been explained by men of the greatest knowledge, still we are convinced that everything which can contribute towards the illustration of an obscure subject deserves to be submitted to a proof, and that it is of use to communicate even simple observations on points concerning which systems cannot be formed till after the expiration of centuries. Considering, therefore, the subject in this point of view, we present the following:—

Pre-sensation may be admitted under three heads:—

I. The pre-sensation which animals have of dry, fair weather.

II. The pre-sensation which animals have of rainy weather.

III. The pre-sensation which animals have of stormy weather.

What regards the two first classes of the pre-sensation of animals is taken from the 'Göttingen Pocket Almanac' for the year 1779, the editor of which, as is well known, was at that period Counsellor Lichtenberg. In this work the most authentic observations of the latest writers are collected. The observations respecting the third class are collected by Dr. F. A. A. Meyer, at Göttingen, whose words we shall here use.

First, then, respecting the pre-sensation which animals have of fair or dry weather.

Clear dry weather generally follows after wet weather, when the atmosphere has been freed from the vapours collected in it by their falling to the earth in rain. Clouds as well as rain are the means by which the air frees itself from the electric vapours that are continually arising; and if these again fall down, it appears very natural that animals which live chiefly in the open air should express by various external movements the ease with which they breathe and perform all the vital functions. From this principle it seems not difficult to explain the following observations:—

The fluttering of bats in the evening, beetles flying about on the highways, and the sporting of gnats towards sunset, require no explanation. We need only remark (what is already well known to every observer), that this pre-sensation is highly useful to bats as well as to insects. Every shower of rain would render it impossible for them to fly, as their wings are not secured by any oily matter against moisture; they would therefore be rendered much heavier by rain, and unfit for flying, and they would not be so easily placed again in folds (which, considering the structure of these animals, is absolutely necessary) as when they have remained dry.

The same principle seems to be applicable to the

high flight of larks and swallows, which perhaps hasten to the upper regions of the atmosphere because they are freer from vapours, and more suited to them, and because the lower regions, being more loaded with vapours, afford them less pleasure than those above. The insects, also, which they pursue for food, take then, perhaps, a higher flight.

The croaking of the green water-frog in ponds cannot be so easily explained; but it seems to express the pleasure arising from the greater quantity of insects then flying about, and which they can catch with more ease and convenience. But clear, dry weather is not so agreeable to frogs as the return of warm weather. If they make a noise in the time of cold rain, warm, dry weather will follow. But if the dry weather proceeds from raw wind, and if warmth and rain succeed, their noise may foretell rain; and therefore Linnæus's rule, *prædicit pluviam*, will lose nothing of its truth. He seems so much the more to be right, as more raw than warm dry days take place in the climate of Sweden.

That the weather-fish* (*Cobitis fosarlis*) leaves the water quite pure during dry weather, and the green frog† sits at the top of the glass, may proceed from the lighter or heavier state of the atmosphere, particularly as the latter is remarkably fond of cleanliness and moderately pure air.

The assembling of ravens in the fields, and the singing of the wood pigeon, may be easily accounted for from the above principles.

"I have never," says Dr. Meyer, "seen birds dress their feathers with oil from the fat glands, in order to secure them from rain; but I have observed many do so when the atmosphere was overcast, and when there was an appearance of rain. I should therefore include this circumstance in the following class, did not experience admit also of another explanation, viz. that the birds, from the atmosphere becoming lighter, hope for the speedy return of dry weather, and therefore anoint themselves, and secure their feathers from moisture, that they may be able to fly higher than usual with less impediment. If the last explanation ought not to be altogether rejected, as I do not think it can, we may admit of this observation; especially as all the experience of men worthy of belief allows of no reasoning to be brought against it."

The expression of animals which show a pre-sensation of rainy weather may be explained partly from the increasing weight of the atmosphere, partly from their manner of living, and partly from the want of moisture, which is necessary to their existence.

The restlessness of domestic cattle may proceed from many causes. It is known that the atmosphere in summer, before rain falls, is generally heavier, on account of the electric vapour that arises. The insects which infest cattle, and which mark this heaviness, become then more numerous, and getting into the stalls where the cattle are kept, torment them and make them restless. The ascending vapour has also perhaps an effect on the skins of these animals, which ceases when the earth does not suffer so much vapour to escape as before; or the air, too strongly charged with electricity, excites in them an unpleasant sensation. Indeed, it appears strange to explain the same phenomenon from two perfectly opposite causes—a want and an excess of electricity; but we are acquainted with similar cases in medicine. People who have wounds or old ulcers feel, on a change of the weather, a contraction and burning on those parts; and why should not such affections take place in animals?

* So called because kept in Germany to foretell changes of the weather. When the weather is fine they continue quiet, but before a storm, or rain, are very restless.

† This animal, though very common in many parts of Europe, is not found in England.

All these grounds taken together will be sufficient, in our opinion, to explain why horses and asses rub themselves, shake their heads, and snuff the air by turning up their noses; why asses bray much and jump about; why cattle scrape up the earth and stamp with their feet; and why swine, though not hungry, eat greedily, and dig up the earth a great deal with their snouts. The restlessness, running about, scraping with the feet, and eating grass among dogs, and moles continually throwing up the earth, can all be deduced from the same, as well as the cats dressing themselves.

"I have remarked," says the authority last quoted, "that cocks crow on every change of the weather besides at the usual time. They, as well as pigeons, hasten to their places of shelter, in order to be secured against the rain, the approach of which they must be sensible of by the continually increasing weight of the atmosphere.

"The cause of fowls, pigeons, quails, and other birds washing themselves appears to me to be a certain heat or itching, which they wish by these means to remove.

"Swallows, in all probability, take a low flight on the approach of rainy weather because the electric atmosphere is too heavy for them, and because they have not sufficient strength to move above it. But cranes, as being stronger birds, employ all their strength to rise above it, and therefore fly so high.

"I have remarked in ravens, that their croaking, unless when they smell carrion, proceeds from fear. They observe, perhaps, by the atmosphere still becoming heavier, that a storm highly disagreeable to them will soon take place, and therefore they croak and attach themselves to trees; and when they are startled by anything uncommon they take a higher flight, making a loud cry. They easily discover their persecutors among men, and always cry with a loud noise as long as they think they are pursued by them."

That jackdaws, on the approach of rainy weather, should flap their wings and pick their feathers with their bills, may be explained partly by an unpleasant sensation before rain, and partly from the state of the atmosphere.

To the before-mentioned itching or burning sensation is referred also the bathing and plunging of water-fowl. That the birds of the forest should hasten to their nests is very natural, as from the state of the atmosphere they must apprehend rain.

The crying of peacocks, except at pairing time, appears to be a phenomenon analogous to the crowing of cocks. This has been often remarked on a change of weather, and often even on a change of wind.

That storks and cranes place their bills under their wings, is a phenomenon remarked also among domestic fowls when they fly to their roosts to secure themselves against rain. Their pecking their breasts seem to signify an itching sensation in that part of their bodies.

The croaking of the male green, or tree, frog seems to denote an unpleasant sensation, for in fine weather they have been remarked not to send forth the smallest cry. But the appearance of toads implies a pleasant sensation, as these animals are so fond of living in dirt.

Ants labour with great diligence, and bees hasten home, and do not fly far from their hives, because they follow their instinct. The former endeavour to complete their habitations, and to secure themselves better against rain, and perhaps to lay up provisions against the rainy season. The latter hasten home to their hives, and fly no more abroad, because the wet would impede them in their flight and labour.

Gnats (*conops*) come into houses to secure themselves from rain, which would impede their flight, and then they attach themselves to the legs to procure that nourishment which is denied them without.

The increased biting of fleas we cannot explain, as the natural history of this and other similar insects is as yet too obscure.

Earthworms creep from their holes through instinct, as they can move themselves forward only upon earth that is slippery.

A pre-sensation of storms has also been observed among the most perfect of the *mammalia*, but as yet only with two, viz., the man and the dog. Both these seem to have a sense of the increased electricity of the atmosphere. It appears in general that the more imperfect animals remark only the approach of dry weather; the more perfect the approach of rain; and the most perfect the approach of storms. All animals, perhaps by their external senses, and all plants by their organs, are sensible of the variations of the weather; but plants are not here our object, nor is it necessary to prove the influence of the weather on them, as it is sufficiently apparent to every observer. Here we allude only to the external expression of internal sensation as may be seen by the adduced instances; else one might consider the shutting and expanding of many plants as foreboding variations of the weather.

The dog, on the approach of rainy weather, expresses signs of uneasiness; scratches himself because the fleas then bite him with more violence, digs up the earth with his feet, runs round, and eats grass; he is accustomed, however, to do the latter when he is very hot, perhaps to cool himself, and in general a storm follows soon after. Before a storm he evaporates more strongly, so that his smell becomes intolerable; he creeps in a dejected manner to his master, and lies quiet. The cat seems also to have this in common with the dog, that she creeps to her master also on the approach of a storm. But all these phenomena require a further explanation. The most perfect of all animals, man, is, on the approach of storms, only subject to certain unpleasant sensations; but these must teach him in the most striking manner, that his spiritual part, even though it disengages itself so much from oppressive cares, is immediately connected here below with a sluggish body, which frequently exercises tyrannic sway over the soul. Men in a sound state of health are subjected, on the approach of stormy weather, to a heaviness of body and mind, a want of capacity to perform their usual occupations, a yawning and relaxation, which are highly disagreeable. These are often accompanied also with a sensation of heat. All these phenomena appear in some more, and others less, and in some do not take place at all; but the last case happens very rarely. Such persons, or those whose juices are corrupted, experience besides the above, an itching heat in those parts of their bodies which are covered; and many who have old wounds, ulcers, and the like, have in these uncommon sensations. Many of these may be ascribed to perspiration checked by the great heat; though, as Weickard, a philosophic physician, asserts, the want of electric matter in the body may also have some share in them.

When stormy weather happens in winter, these sensations, as well as the before-mentioned pre-sensation of animals, do not appear to take place; at least no one has ever observed them. This, in all probability, arises from the influence of the season. These observations are to be considered only as hypothetical explanations of well-known facts.

* * The Office of the Society for the Diffusion of Useful Knowledge is at
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THE WALHALLA, OR HALL OF HEROES, IN BAVARIA.



[The Walhalla.]

MORE than twenty years since, the present king of Bavaria, whilst Crown Prince, projected the erection of a temple, under the name of Walhalla (Hall of Heroes), to be destined as an imperishable monument to the national glory of Germany. This was designed to contain the busts and statues of the most celebrated men of Germany in all ages. Preparations for the work went on for some years. The first stone was laid by the king on the 18th of October, 1830, the sixteenth anniversary of the battle of Leipzig, the day of the deliverance of Germany from the French dominion; and the work is now far advanced towards completion. The temple is built on a hill near the village of Donaustauf, about four miles from Ratisbon. The situation had been admirably selected by the king, in the midst of the vast plain of the Danube, and in the centre of Bavaria. It stands on the summit of a fine bold hill, rising immediately from the

banks of the Danube, and is surrounded by a fine amphitheatre of hills, clothed with oak and fir, on the summit of one of which are the ruins of the castle of Stauff. On the side towards the river vast flights of steps lead up to the building, which is approached on the other side by a romantic road which winds up the hill through a fine grove of oaks.

The temple is Doric, of grand dimensions, and is built entirely of a whitish-grey marble, the columns and interior ornaments being of a finer kind of marble got from the quarries in Bavaria. It is designed by the Baron Klenze, one of the most distinguished architects of Germany, and presents a magnificent object to those passing up and down the vast waters of the Danube. The pediments at either end are to be filled with sculpture by the first artists of Bavaria, and the interior presents an oblong square, the walls of which above are ornamented with a carved frieze, representing the

migrations, religious customs, manners, wars, and commerce of the primitive Germans. Under this frieze, (arranged in rows, divided by pilasters of red marble, with white Ionic capitals,) are to be the statues, busts, and names of all "the distinguished great, of all ranks and conditions in the state, of the whole German nation, and who here, in the Walhalla of Louis, as in the dwelling places of the blessed, are united."

It is but justice to the king to state, that in the buildings and works of art with which he is unceasingly adorning his country, his own private revenues supply the greater part of the cost; and that already the effect of encouraging the arts is discovering itself in the increasing taste and intelligence of the people. Nowhere is the general interest taken in the progress of the great works now in a course of execution under the auspices of the king, more conspicuous than is shown by the numbers which flock to the Walhalla to watch its completion.

THE VINTAGE OF CASTILE.

[From a Correspondent.]

THE wide and unbroken plains of Old Castile present an aspect more bare and uninteresting than any other part of Spain, as their surface consists of little more than vast fields of corn, varied in some districts with extensive vineyards; scarcely a single tree or shrub being met with sometimes in distances of many miles, and the ground appearing parched by the rays of the sun.

Although this province is generally considered rather as a producer of grain than wine, still even in the latter branch it has attained some celebrity in the Peninsula; as the red wine of Toro is esteemed one of the best of North Spain. During a residence of some months in the neighbourhood of this city, I had an opportunity of observing the progress of the vintage, the details of which may not be uninteresting to an untravelled Englishman.

The vine-grounds in this district are somewhat numerous, and generally of from five to twenty or thirty acres in extent, being separated from each other by intervening tracts of corn-land. The plants are set at intervals of about two yards; they are near three feet high; not more bushy than our English red currant trees, and very much resembling them in appearance. They grow entirely unconfined, very remarkably differing in this respect from those of Biscay and some parts of France, which are either trellised or trained up short poles, in the same manner as our hops in Kent. The grapes are generally ripe about the end of September, when a day is fixed for the commencement of the vintage, different days being chosen for each village, in order that they may have the opportunity of affording each other mutual aid, as the process of making the wine requires the assistance of many hands, from the short space of time in which it ought to be perfected.

When the day arrives on which the gathering is to commence, the villagers, male and female, assemble at the vineyard, bringing with them their carts, &c., at about two in the morning. On their arrival they distribute themselves in parties of from five to ten or twelve, in different spots, each having a tall narrow basket in their centre to receive the fruit, which they pluck with the fingers, unaided, as in other countries, by the knife or scissors. They continue in the field pursuing this toilsome occupation during all the scorching heat of the day, and seldom return to the village earlier than eight in the evening; when, instead of being, as might naturally be expected, exhausted and silent, they enliven their return by dancing and singing.

The gathering continues about three or four days, and during this time the process of making the wine has been carried on by other parties in the village itself. Immediately on the arrival of a load of grapes they are discharged from the baskets which convey them, through an aperture in the wall, into the "hagal" or pressing-room, and as soon as a sufficient heap has been collected there, (say sixteen to twenty cwt.) they are placed together in a heap in the middle of the room, bound round with cord, and trodden down by men, for the purpose of rendering them a compact mass previous to pressing. A piece of boarding sufficiently large completely to cover them, is then laid on the top, and above it is placed a huge beam firmly fixed down (at the end close to the grapes) by movable frame-work. The other end (the beam being some seven yards in length) is attached by means of a screw to a heavy block of stone underneath it, weighing from four to five cwt. By dint of working this screw, the said stone is upraised, and being suspended, exercises, by its absolute weight and the leverage of the beam, a sufficient pressure to express all the juice from the fruit placed under the boarding. The liquid then runs, by means of the obliquity of the floor, into a small well on one side, from which it is baled out into the tuns or barrels in which they intend to keep it.

The only part of the process now remaining is the preparing and putting in the "madre," which consists of a quantity of red grapes separated from their stalks, by scraping them on a rough piece of wire-work. These are thrown into the barrel entire, and sinking to the bottom, remain there until the following vintage, when the vessel is emptied. They are then extracted and used for making brandy, of which they produce a very tolerable quality.

The wine thus put into the barrels is left uncovered, (each vessel having a hole about a foot square on the uppermost side,) and in about two or three days commences fermenting, or "boiling," as it is termed in the language of the country with great propriety, for the agitation of the liquid is so violent, that it may be heard even outside the building where it is placed.

Three months after the completion of this process, the wine is fit for consumption; and is drawn out from the vessels where it was originally deposited, in sufficient quantities to supply the immediate wants of the family to whom it may belong, and its customers.

The white wine is produced from the white or green grape; but as "madre" of red grape is thought to increase the strength and flavour of wine generally, less of the white is to be met with, from the fact that into the juice of the lighter-coloured grapes they generally infuse "madre" of the red and black kinds, which of course changes its colour to their own.

The grape is usually calculated to produce about half its own weight in liquid; so that twenty cwt. of fruit would yield ten cwt. of wine. The price at which the best red wine is sold is seldom higher than 4*d.* per gallon, and the commoner much lower—for instance, in Navarre the red wine was in many instances sold for ½*d.* per gallon in 1830, from the abundance which prevailed. We must, however, bear in mind the disadvantages it suffers under; which is, that it will not keep beyond the vintage succeeding its own—so that it must be disposed of in autumn, to make room for its successor.

Thus simple is the method used by the Castilians in making their beverage; and its excellent quality in some parts of the province, even after this primitive process, places it beyond a doubt that, if subjected to the improvements and refining of more advanced and intelligent vintners, it would rank second to none in quality and flavour, and perhaps form an article of export equal in importance to the Xeres itself.

EXTRAORDINARY DELIVERANCE.

[A CORRESPONDENT sends us the following narrative, which he says is no fiction or imagination of the brain, but a plain statement of fact, of which he himself was in part an eye-witness, and that every circumstance here stated is strictly true.]

THE following melancholy event, and extraordinary deliverance from one of the most horrid deaths the human imagination can conceive, occurred in the Staffordshire collieries about twenty years ago. I have no data by me to state with certainty the exact year, but think it must have happened in 1816 or 1817.

About midway between the towns of Wednesbury and Bilston, on the great Holyhead Road, the traveller must have remarked, on crossing the canal at a place called Moxley Heath, one of the finest beds of bright red sand in the kingdom. This bed of sand is many yards thick, and being extensively used in the iron founderies, hundreds of boat-loads are taken away for that purpose. A little to the left of this spot, on a Monday morning, about the period before named, and whilst the workmen were busily engaged at their labours in the coal mine underneath, a sudden "crownings in" (as it is emphatically termed by the colliers), or falling in of the superincumbent strata, took place about the centre of the works, owing, as was supposed, to the bearings that are usually left, being too much weakened to support the heavy mass above. At this moment about fourteen or sixteen men were at work below, nearly all of whom were then employed at the extremity of the mine, and the disrapture happening about midway between the shaft of the pit and the situation where the workmen were engaged, the drift-ways were instantly filled with the falling mass; consequently all escape for them was cut off, and their lights extinguished by the violent concussion of air, &c. The few workmen that happened to be near the bottom of the shaft were instantly drawn up to the surface. The alarm was given, and spread like wild-fire through all the surrounding working districts. Thousands were seen rushing to the fatal spot as to a common focus—fathers, mothers, wives, and children by their cries adding to the misery of the scene. Nearly all work in the neighbourhood was suspended, both employers and workmen assembling to render assistance. Of course the fate of the ten or eleven men stopped up in the mine was all matter of conjecture. Whether the fallen matter had choked up the farther workings and buried them alive, or supposing this not to be the case, whether they could exist without food or fresh air until their deliverance could be effected, was equally matter of doubt. After some consultation the engine was set to work, and parties of workmen went down the pit in the hope of clearing away the rubbish below so as to get to the unfortunate men, whilst loads of faggots and straw were emptied into the hollow formed on the surface by the fall, (which resembled an inverted cone of from fifteen to twenty yards in diameter,) for the purpose of stopping up the fissures and preventing the running down of any more loose sand, &c., from the top. This course was persevered in for some time, but it was at length found that their labours were ineffectual, as sand, water, &c., kept pouring down as fast as it could be removed from the bottom. Another consultation was now held, when the only hope of saving the men that remained was, the driving a head through the solid coal in a winding direction round the fractured part into the farther end of the mine. This was a work of great labour and difficulty, as near 100 yards in length of solid coal was necessary to be penetrated by the shortest possible cut. Subscriptions were raised, and the different masters set a laudable example to their men by their personal assistance. Working gangs were formed, sufficiently numerous to relieve each other by short relays. This

undertaking was instantly commenced with the greatest alacrity on the part of the workmen, some cutting away with their picks, others clearing away the coal from behind—the men retiring to rest as they became fatigued, and their places occupied by fresh hands. The head was driven no larger than was necessary for the men to sit to their work, and resembled a tunnel. Day and night the work proceeded, until the close of the week, the public anxiety increasing as the cutting advanced; the absorbing questions early and late being, "Has anything been yet ascertained of the fate of the unfortunate colliers?"

On the following Sunday morning a rumour was spread that the men engaged in driving had heard sounds from within like the distant tapping of hammers, and on proceeding to the spot I found the information correct, the tapping becoming more distinct as the work proceeded. All now was increased activity. They were no longer labouring without strong hopes of saving some of their fellow-creatures, and this feeling gave an additional stimulus to their exertions. Early on Monday morning (one week from their incarceration) it became generally known that voices had been heard within audible enough to warn the drivers (who, in their anxiety to shorten the cutting, were approaching too close to the fracture) to keep more to the left*. It was also pretty well understood, for some miles around, that the head would be driven through in the course of that day, and again the neighbouring population poured to the scene in countless numbers,—the diverging roads presenting one moving mass. About one o'clock in the afternoon the head was completed, sufficiently large to allow the workmen to enter, when nine men and one boy were found, alive indeed, but in the last stage of exhaustion! The news was instantly communicated to the assembled crowd above. The burst of feeling at this announcement I cannot attempt to describe. At this awful moment the sensations of the assembled relatives of these unhappy men were most intense. One poor woman, it was stated, had died with excess of joy upon learning that her husband was still alive, after a whole week of the most agonizing suspense. Medical practitioners were in attendance, and by their directions the air was admitted into the confined portion of the works by degrees: warm gruel and other restoratives were carefully and sparingly administered to the sufferers down in the works; after a proper interval, they were gradually brought out, enveloped in blankets,—drawn to the surface each in the lap of a sturdy miner,—instantly put into coaches, which were ready in waiting, and conveyed to their respective homes.

It was now ascertained that but one or two individuals and a horse or two had perished. One poor fellow was passing through the drift-way at the time of the fall, and was buried in the rubbish, but not so completely as to cause instant death. He lingered for some time; and his unfortunate companions, unable to render him assistance, heard his cries for help, as they became gradually weaker, till life was extinct. It also appeared that the sufferers had made a fruitless effort to effect their own deliverance by removing the fallen earth as long as their strength would permit. They had probably taken a meal with them, as is usual with colliers when they descend the pit, and had caught a little water in their caps, which had helped to allay their thirst, and this was their only sustenance during the seven days and nights that they were stopped up; but they had also heard the blows of the pick as the head was being driven through, and the hope that their deliverance would be effected had doubtlessly con-

* The principle of sounds being conveyed through a dense solid medium is now too well understood to require any explanation here.

tributed to sustain their sinking spirits; nevertheless, had any relaxation taken place in the efforts that were made for that purpose, the consequences must have been fatal to them. One man had a son with him in the mine, a boy about twelve or thirteen years old, who sat upon his father's knees, and slept the greater part of the time, occasionally waking and crying for his mother, then falling asleep again. One remarkable fact is, that on being asked if they knew the day of

their deliverance, they supposed it was on the Friday. It would be naturally enough thought, that in their dark and dreary confinement time would have dragged on so heavily, that they would have supposed the duration longer than it actually was; but it is probable that the close and half-stifled nature of their situation brought on drowsiness, and that they had all slept more or less: I believe they all ultimately recovered.

HOUSEHOLD SPINNING-WHEELS AND THE FIRST SPINNING MACHINE.

(From 'Dr. Ure on the Cotton Manufacture.')



[The Jersey Wheel.—A and B are the hand-cards and bobbins of rovings.]

Two kinds of household wheels have been used by spinsters, probably from time immemorial; the first is commonly called in this country the big wheel, from the magnitude of its rim, or the wool-wheel, from its being employed in the spinning of sheep's wool; it is represented in the figure. It was equally well adapted to spin cotton, from the analogous form of its filaments, which it did at two independent operations. At the first, the spongy cylinder turned off from the hand-card was drawn out and slightly twisted into a porous cord, called a roving; at the second, this cord was stretched and twisted into a fine cohesive thread; in either case the spinster, having fixed round the spindle the extremity of the carding or roving, seized it a few inches from the end with the finger and thumb of the left hand, and while she turned round the wheel with the right, so as to make the spindle revolve, she progressively extended the cotton cord by drawing her hand from near the spindle to the position in which it is placed in the figure. She now completed the torsion by turning the wheel till the thread had acquired the desired degree of twist, and then, by a slow counter-rotation of the wheel, and proper giving-in of the left hand, she wound up the thread upon the spindle into a conical shape, called a pirn or a cop. This is the ancient spinning implement of Hindostan. The first mechanical invention regularly employed with profit upon a manufacturing scale for spinning cotton in England was constructed upon this principle; several spindles, at first eight, afterwards eighty, being made

to whirl by one fly-wheel, while a moveable frame, representing so many fingers and thumbs as there were



[A Hindoo Woman spinning cotton yarn on the primitive wheel of India.]

threads, alternately receded from the spindles during the extension of the thread, and approached to them in its winding-on.

This multiplying wheel, called a spinning jenny, was invented by James Hargreaves, about the year 1764, at Stand Hill, near Blackburn, in Lancashire. He was by trade a weaver, and, being aware of the jealousy

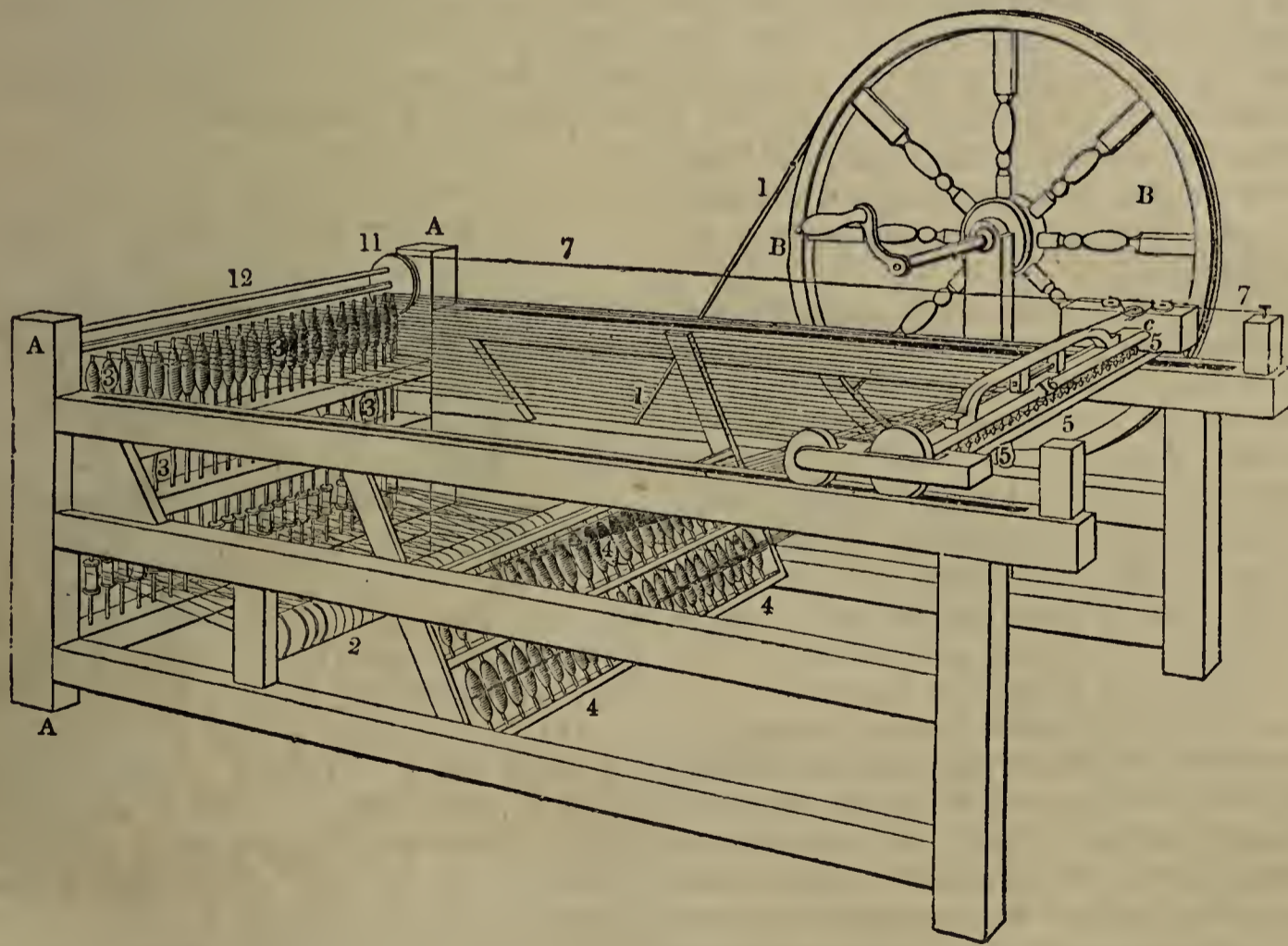
and ill-will likely to be directed against the author of any mechanical substitute for hand labour by his narrow-minded neighbours, he worked in secret, without the aid of any capitalist, under the disadvantages of poverty, and a family of seven children. Before the year 1768 he had, however, mounted and sold several of his jennies. The spindle in the spinster's wheel was always horizontal, but the spindles in Hargreaves' machine were upright, or very slightly inclined from the perpendicular—a position, in fact, essential to its due operation—one which was suggested to him, *it is said*, by observing a common wheel continue to revolve after it was accidentally thrown down on the floor with its spindle turned up.

Hargreaves contented himself, for some time after making the jenny, with spinning weft, with the assistance of his wife and children, for supplying his own loom, according to the custom of the weavers of that period, who received their warp from the wholesale manufacturers. The secret at length transpired, through an indiscretion of female vanity, and excited such a tumult among the spinsters, and their partisans, of the neighbourhood, that they broke into his house in a riotous manner, and destroyed the hated rival of their fingers. Finding the fruit of his ingenuity, toil, and privations blasted, and his further prosecution of the plan impossible amidst an enraged populace, who even threatened his life, he migrated to Nottingham in 1768, where he found in Mr. Thomas James, a joiner, a partner willing and able to assist him in erecting a small spinning-mill upon the jenny plan. For this invention he obtained a patent in the year 1770, under the following title: "For a method of making a wheel or engine of an entire new construction, and never before made use of, in order for spinning, drawing, and twisting of cotton, and to be managed by one person only, and that the wheel, or engine, will spin, draw, and twist sixteen or more threads at one time, by a turn or motion of one hand, and a draw of the other." "One

person," says he, in the specification, "with his or her right hand turns the wheel, and with the left hand takes hold of the clasps, and therewith draws out the cotton from the slubbing (roving) box; and, being twisted by the turn of the wheel in the drawing out, then a piece of wood is lifted up by the toe, which lets down a presser wire, so as to press the threads so drawn out and twisted, in order to wind or put the same regularly upon bobbins which are placed upon the spindles."

Unfortunately for this inventor he had, under the pressure of poverty, mounted and sold several jennies before the date of his patent; so that when they were beginning to be rightly appreciated, and were promising to procure him a recompense somewhat proportioned to his deserts, he found, while his invention was extensively pirated by the manufacturers of Lancashire, that it could not be sustained in a court of law. In an evil hour also he refused to accept the sum of 3000*l.*, which the delegates of these manufacturers tendered to him for permission to use his machine; he demanded a somewhat larger sum, which was refused, and eventually he got nothing, his attorney having abandoned the prosecution from a conviction that a favourable judgment would not be obtained in a court of law. Hargreaves died in 1778, a few years after this disappointment, but he did not fall a victim to poverty, as some have erroneously stated. The spinning factory of which he was a partner went on tolerably well, and enabled its author to live in humble comfort at least, and to leave a decent provision for his widow and children.

The jenny received some slight improvements, first from Hargreaves, and afterwards from other mechanics; but in fact it is too simple a scheme of spinning to afford much scope for modifications. Crompton, the celebrated inventor of the mule, learned to spin upon one of the original jennies so early as the year 1769. The following figure and description will



[Hargreaves' Spinning Jenny in its most improved form.]

explain the construction of the jenny in its best state, and show that it is merely a many-spindled wheel upon the ancient wool-spinning principle, in which a definite length of roving is let out and extended during the revolution of the spindle to which its end has been previously attached.

The spindles are seen to be arranged at one end of

the frame, and the clasp or clove which holds the rovings, and which is equivalent to the left hands of several spinsters, is mounted upon a carriage, which moves backwards and forwards on a railway, to represent the backward and forward motions of the left arms of these spinsters.

The steel spindles, 3, 3, 3, stand upright, about three

inches apart, at one end, *A A*, of the machine. Their lower ends are pointed and turn in hard brass steps fixed in a cross rail of the frame, and are supported near the middle of their height by passing through brass collars in another horizontal rail; a small pulley, called a whorl, whirl, or wharf, is fixed on each spindle near its bottom, to receive an endless cord which passes round the horizontal cylinder or oblong drum, 2, of about six inches diameter; this drum is made of tin plate for lightness' sake, is supported by pivots at its ends in the sides of the frame, and lies parallel to the row of spindles, so as to turn them all round together by transmitting a small band about each whorl. The drum is driven by a band (1, 1) which passes round a pulley upon its end, and also round the great wheel (*B, B*), fixed by means of a framing attached to the ceiling of the apartment. The wheel, *B*, is turned by applying the right hand of the spinner to winch *B*, just as in the household wool-wheel.

In front of the spindles, and about a foot higher than their tips, a long horizontal cross-rail, 16, is shown, supported at each of its ends in the wooden blocks, *c, c*, resting on friction-wheels, to run on the railway, so that the rail or carriage, 16, can move horizontally forwards and backwards through a space of five, six, or seven feet, without deviating in the least to the right or left, and therefore with a precision surpassing that of the hand-spinster's left arm. The under side of the cross-bar or rail, 16, is notched to let the rovings pass through, which notches may be partially filled by projecting pieces upon the lower bar of the clasp, when this is raised to pinch the rovings preparatory to their elongation into threads. When the lower bar or jaw is let down, the roving cord can pass freely through the notches. The rising and falling of the under rail is effected by small cords attached to it at every yard of its length, which pass over small pulleys sunk into the substance of the upper bar, 16, and run to a handle placed over the middle of that bar, and beneath an arched bar fastened to the top of the clasp. The spinner holds this handle in his left hand, while with the right he turns the wheel, and with the fingers of the left hand he can lift the lower rail, 5, of the clasp, and draw it close to the upper one, where it is kept by a spring catch; when this catch is pushed back, the lower rail falls by its own weight, and, releasing the rovings, lets the proper length of them easily pass through for another draught of yarn.

The cops, or bobbins, of rovings to be spun are supported in the inclined frame 4, 4; they are mounted upon iron wires, or skewers, in two rows, one above the other, the number of cops in each row corresponding to half the number of spindles.

The spun threads are guided by the wire 12, when they are to be wound upon the spindles. This wire is attached to a horizontal rail, which turns at its two ends on pivots close to the row of the spindles, and it may be lowered so as to depress the thread to any level at the pleasure of the spinner by his pulling the cord 7, and turning round the pulley 11, which depresses the wire 12.

The jenny is worked by one person, male or female, who stands within the frame, and turns the wheel *B* with the right hand, whilst he holds the clasp in the left, so as to be able to run it backwards and forwards along its railway at pleasure. The rovings are drawn through between the bars or jaws of the clasp 16 and 5, the end of each being attached to its particular spindle. The clasp being open, its carriage is drawn backwards from the spindles till the requisite length of rovings has run freely through or be given out (as it was anciently between the finger and thumbs) by being uncoiled from the balls, or bobbins, at 4. This length is regulated by a mark made on the frame of the machine, to indicate when the clasp carriage has arrived

at its proper position; the jaws of the clasp are then made to close by raising the handle under the catch as above described, so as to pinch all the rovings. The spindles are now caused to revolve rapidly by turning the wheel *B*, at the same time that the carriage is drawn regularly backwards from them; thus twisting and extension go on simultaneously, and in any proportion to each other, according to the relative actions of the right and left hands of the spinners; when the threads have gained their utmost length they receive a finishing twist to strengthen them, especially for warp yarns. In order to wind up these threads they are pushed down upon their respective spindles by depressing the faller-wire, 12, during which movement the wheel *B* is made to revolve slowly, in order to wind the thread regularly upon the spindles, in proportion as the clasp-carriage is moved towards them; as soon as the carriage has got home one series of threads is finished, and another series is begun by an operation similar to the preceding.

In Hargreaves' original jenny-frame the *presser-wire*, which distributes the yarn over the spindle into a shapely cop, was connected by a cord going over a pulley to a piece of wood, which was lifted up by the toe of the spinner in the act of winding on the threads.

This implement may be considered as having still a domestic character, and was in fact speedily spread as such through the houses of a great many weavers in Lancashire, supplying the long-felt deficiency of spinning hands; as a woman could with it easily spin as much as sixteen, twenty, or thirty persons, with the one-thread wheel. It therefore gave a fresh impulse to the old Manchester fabrics of fustians, &c., with linen warp; for the yarn which it furnished, though somewhat more evenly, was of the usual west quality. It was round about Blackburn, the inventor's place of residence, that the jennies were most rapidly multiplied, not altogether by his own hands, but by surreptitious imitations; which were very easy for any clever carpenter or wheelwright to make, on account of their great simplicity and analogy to the ancient spinning-wheel. The memory of Hargreaves deserves to be honoured for his multiple hand-wheel, though it realized nothing new in the principle of spinning itself.

KNIGHTS OF MALTA.—No. IV.

[Concluded from No. 273.]

In a few days the breach was opened, when the most murderous actions took place. The Grand Master continued to send reinforcements to the important post, and every night the wounded were removed from it in boats. For more than a month, with open breaches, and with the walls falling around them and under them, did the Knights gallantly hold out in St. Elmo where the Turks fell by thousands. In storming the raveline the infidels lost 3000 men—the Order twenty good knights and 100 soldiers. Scenes occurred that were worthy of the infernal regions. The gunners of the Order invented a kind of fire-work, which had a frightful effect. Hoops of the lightest wood were dipped into brandy, rubbed with boiling oil, then covered with wool and cotton, soaked in other combustible liquors, and mixed with saltpetre and gunpowder. On an assault fire was set to these hoops, which were then taken up with tongs and thrown down in the midst of the assailants, who, crowded and driven together, had no means of escape. Such as got entangled in them almost inevitably perished, and not unfrequently two or three Turks were involved in the fiery embrace of one hoop, and burnt alive together. The cries, the shrieks of these poor wretches—the groans of the wounded, the long rattling of the musketry, and then the roar of the artillery, made a very Pandemonium

upon earth. At last St. Elmo fell, having been so surrounded by the Turks, that it could receive no more reinforcements from other parts of the garrison. When the infidels entered that little fort, they found not a single knight alive. One hundred and thirty of the best of the Order, with more than 1300 soldiers, fell in the defence, but in the attack the Turks lost 8000 men.

This bloody page may serve as a specimen of the horrid warfare which we have neither space nor inclination to describe in detail. After many variations of fortune, under some of which they were near taking St. Angelo, St. Michael's, and the other forts and works, the Turks, utterly dispirited by the arrival of a general of the viceroy of Sicily with reinforcements for the Christians, broke up the siege, and fled in the greatest confusion to their ships. During the siege, which lasted three months and a half, the Turks are said to have lost 25,000 men; the Christians 7000, between soldiers and inhabitants, besides 260 Knights. The walls and buildings of the towns were little better than a heap of ruins; the casals, or villages, were nearly all burnt; the cisterns, upon which the island almost wholly depended for water, were drained; and there remained in the hands of the Knights neither money, provisions, nor men to meet another siege, for which the Sultan immediately prepared. In these circumstances La Vallette had recourse to bribery, and engaged a set of desperate incendiaries, who succeeded in burning the arsenal at Constantinople, together with nearly all the Turkish ships intended for the expedition against Malta. This daring deed gave the Knights a respite, and in the course of the following year their powerful enemy, Solyman the Magnificent, died while making war in Hungary. In the meantime the fortifications were repaired, extended, and made infinitely stronger than ever; the stone was laid for a new city, which was called La Valetta, and the name of the Borgo (Burgh), where, next to St. Elmo, the hardest fighting had taken place, was changed into that of "Città Vittoriosa." La Valetta, the present capital of the island, soon became a stately city. The reader will find a short description of it in No. 131 of the 'Penny Magazine.'

The merit of heroic bravery cannot be withheld from the Order, but it unfortunately happened that they were no sooner relieved from the Turks than many of the Knights gave themselves up to their old vices; and it may be said that this insolence, arrogance, and open libertinism continued pretty steadily on the increase, until divisions and weakness brought about the total overthrow of an institution which, however, had outlived the period of its usefulness, and which must soon have fallen, though, perhaps, less disgracefully, as a thing obsolete and uncalled for. The real interest of the Hospitallers' history ends with the great siege, for though they afterwards fought against the Turks in the great battle of Lepante, they brought but a very small force into action, and an account of their many galley-fights with Turks and Algerines would be insupportably tedious. Those paltry combats of later days led to no results; and so far were they from keeping the seas clear of African corsairs, that even the coasts of Sicily and Naples, within sight of Malta, were constantly ravaged by Algerines and robbers from Tunis and Tripoli.

At last the Knights nearly left off fighting altogether. Making some exceptions in favour of conscientious men who really felt the weight of their vows, and of a few more who, at least, would have maintained a semblance of discipline and decorum, the brethren only remained with the Order for the means it afforded them of indulging in all secular and profane pleasures; and in their sensual pursuits they seem to have been restrained by a much weaker sense of shame than generally falls to the lot of men who have never vowed celibacy, poverty, and passive obedience.

The wealth of the Order was a permanent fund, the

usufruct of which was divided amongst the Catholic aristocracy of Europe. A commandery or a baillewick was a splendid provision for a younger brother, and men (after proving their quarters) became Knights of St. John, just as they did bishops, or colonels of regiments, or court chamberlains. No merit, no virtue, no heroism, could entitle one not of the highest aristocracy to a share in the prize. After a brief residence at Malta the Knights passed the rest of their time in their own countries, or only made a visit now and then to the island; and latterly these sworn soldiers of the Cross, instead of being found with "harness on their backs," fighting the Paynim in the Holy Land, or in the garb of humility, feeding the poor and healing the sick in their hospitals, were to be looked for in the most luxurious and voluptuous courts of Europe; in the ball-room, the boudoir, and the Opera-house. The way in which they ruled their poor subjects of Malta and Goza was debasing and tyrannical in the extreme; but, like all despots, the Knights called their régime a "mild and paternal government."

At last this order of things was struck to the dust at one blow, and with a facility hardly to be expected. On the 9th of June, 1798, Napoleon, on his way to Egypt, stopped before Malta; and then that admirably fortified place, in which a brave garrison might have held out for years, surrendered to the French in a few hours. The resident Knights were shipped off from Malta, which had been held by the Order for the space of 268 years. On the 5th of September, 1800, the French in their turn surrendered Malta to the English, who have ever since kept possession of it. Although a few worn-out old men are still seen creeping about certain parts of Europe with the peculiarly-shaped Maltese cross on their breasts, and although some petty governments occasionally give the riband and the cross to a courtier (which they have no right to do), the Order of the Knights Hospitallers of St. John has virtually ceased to exist. Some attempts were made to re-establish it, and at one time Paul, the insane emperor of Russia, forgetting that he was not a Catholic, but of the Greek church, thought of putting himself at the head of it. But the French, at the beginning of their revolution, had seized all the commanderies in France; the estates of the Order were subsequently seized in Italy, Germany, and Spain, and a restitution of this property, or the island of Malta, soon became hopeless.

Dyeing Cloth of two Colours.—A considerable quantity of cloth is made in the neighbourhood of Stroud, in Gloucestershire, for the dresses of the Indian chiefs, of which each side is of a different colour: to prevent the first dye from colouring both sides of the cloth, a paste is prepared of the finest flour, which is spread on one side; the cloth is then doubled, and the edges closely sewn together. On its immersion in the heated dye, the inclosed air expands, and none of the colouring matter affects the inside of the cloth. When this process is completed, the cloth is unsewn, a paste is laid on the side already dyed, and the same method is pursued with regard to the second colour.

THE VICUGNA.

THE vicugna is a variety of the llamas of South America, a species which is connected by many affinities with the camel. Both the camel and the llama are adapted for living in an arid country; but the conformation of the camel fits it for the sandy plains of Asia, while the llama is evidently intended as an inhabitant of mountainous regions; and in South America, where it is indigenous, it is never found in its wild state below a certain elevation of the Cordilleras. If a depression below a certain point occur in this extensive chain of mountains, there the llama is unknown.

The foot of each animal is admirably adapted to the surface which they are respectively accustomed to tread: that of the camel is covered with an elastic sole joining

the two toes together, and it therefore, on the same principle as the snow-shoes of an American Indian, is made to present a broader surface to the yielding sand. In the llama, on the contrary, the toes are divided, and each toe is provided with a strong nail, which assists it in ascending to its elevated haunts, enables it to retain its footing more surely, and to make the most of the uncertain ground upon which it treads.

The llama has not a hump on its back like the camel, but this dissimilarity is merely external, the skeleton of each animal presenting the same arrangement of the bones. They are each beasts of burden. The camel is provided with resources which enable it to pass many days without water; and the stomach of the llama, though it does not resemble precisely that of the camel, is yet enabled by some internal means to obtain the necessary supply of fluid in the midst of a region without springs. Sir Everard Home has described the stomach of the llama, so far as its economy in this respect is concerned. He says, "the stomach has a portion of it, as it were, intended to resemble the reservoirs for water in the camel; but these have no depth, are only superficial cells, and have no muscular apparatus to close their mouths, and allow the solid food to pass into the fourth cavity, or truly digesting stomach, without going into these cells."

The form of the llama is much more elegant than that of the camel. The legs are slender, the neck erect, and head small; the ears long and flexible, and the eyes full and brilliant. When South America was first visited by the Spaniards, the llama and several other animals were incorrectly described in general terms as belonging to the same species. Linnæus divided them into two species, at the head of which he

placed the llama, useful as a beast of burden, and the vicugna equally valuable for its flesh and wool. Other naturalists have adopted different classifications of the groups resembling the llama; but the late Baron Cuvier definitely placed the llama and vicugna in the rank of a distinct species, and regarded the others simply as varieties having affinities to them.

Captain Shelvocke, who visited Peru rather more than a century ago, gave the following description of the vicugna:—"The vicugna," he says, "is shaped much like the llama, but much smaller and lighter, their wool being extraordinarily fine and much valued. These animals are often hunted after the following manner:—Many Indians gather together and drive them into some narrow pass, across which they have previously extended cords about four feet from the ground, having bits of wool or cloth hanging to them at small distances. This so frightens them that they dare not pass, and they gather together in a string, when the Indians kill them with stones tied to the ends of leather thongs."

In Kerr's 'Collection of Voyages,' it is stated that in Chili and Peru about 80,000 of these animals are killed every year for the sake of their wool, and that their numbers are still kept up. Dr. Ure states in his work on the 'Cotton Manufacture,' that among the mummy-cloths brought from the ancient tombs of Arica, in Peru, by Lord Colchester, there are specimens of a sort of worsted stuff, made of the wool of the vicugna; so that at a period long preceding the commencement of manufactures in Britain, or the dawn of civilization in this island, the art of manufacturing cloth had been acquired in those early ages by the inhabitants of this portion of the New World.



[The Vicugna.]

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COFFER-DAM.



[Coffer-dam for carrying on the repair of Blackfriars' Bridge.]

IN bridge-building, as in most other useful arts, improvements have been effected, within a comparatively recent period, which afford striking proofs of the progress of scientific knowledge. Westminster Bridge was completed in eleven years, having been commenced

in 1739 and opened in 1750. Blackfriars' Bridge was finished in 1760, ten years after it had been commenced. The New London Bridge, combining, in a higher degree than any other similar structure in the world, grandeur and simplicity, with utility as an

immense commercial thoroughfare, was completed in seven years five months and thirteen days; being about one-third less time than was required for the erection of Westminster Bridge. Waterloo Bridge was erected within a shorter period, but the obstacles were less formidable than in the other cases.

When it is considered that these bridges are thrown over a deep, wide, and rapid river, and that the tide rushes beneath their arches with great force, they cannot but be regarded as among the highest triumphs of man over physical difficulties. Of the present bridges, that of 1739 was the longest in erecting: Old London Bridge was forty-four years from the time of being commenced to its completion. The shorter time now required in the construction of bridges is owing to the improved state of the art, and to the energy and activity of a generation more deeply sensible of the importance of such works in promoting profitable intercourse, and aiding the operations of a widely-extended commerce.

Before Westminster Bridge was opened, a portion of the structure gave way, and the completion of the bridge was delayed a year and a half in consequence. Since then, it has so repeatedly failed, that nearly all the piers have had to be rebuilt. The causes to which this failure may be attributed are now obviated by the adoption of a different process from that which was formerly in use;—viz., by the formation of coffer-dams, in which the foundation of the piers is securely laid, instead of the old system of resorting to caissons, which is now generally decried, though, when Westminster Bridge was built by M. Labelye, a skilful French engineer, it was much praised for its ingenuity. We shall endeavour to make both plans intelligible to the reader. In ancient times, we may remark, the laborious expedient of directing a river into a temporary channel was sometimes adopted when it was intended to construct a bridge across its waters.

A caisson was a large floating vessel, formed of the strongest timber, of the size and form of the piers of the intended bridge. Each of the caissons of the Westminster Bridge contained 150 loads of fir timber, and exceeded the tonnage of a ship of 40 guns. Their size was nearly 80 feet from point to point; breadth 30 feet, and depth 10 feet. A portion of the pier was erected within this vessel; and being floated to the site of the proposed bridge, the water was admitted, and it sunk, the pier being guided to its proper bed by ropes. The sides and ends of the caisson were then removed, and floated to the surface; the bottom, composed of the most durable timber, strongly bound together, remaining under the stones, and forming the foundation.

In an article in the 'Companion to the Almanac' for 1831, the following objections are made to the plan of founding a pier with caissons:—"The wooden platform, with the pier upon it, being dropped as it were by chance into the stream, is likely to find an irregular or a flat foundation; and, whenever the foundation happens to be of the former description, currents and springs are sure to insinuate themselves beneath, and unsettle the whole superstructure. Besides, wooden foundations are only safe as long as they can be kept completely immersed in water; so that, as often as a very low ebb takes place, there is a risk of the air gaining access to the timber and implanting the seeds of speedy dissolution."

The method of founding piers now in use is by coffer-dams, a description of which we take from the writer just quoted:—"A coffer-dam," he says, "is a space in a river enclosed by two or three rows of piles, generally of either oak, elm, or beech, driven into the ground close together by means of a steam-engine, or any other adequate power. The water then is pumped out from the enclosed space, in order that the foundations of the

intended pier may be laid in the solid ground. There are two sorts of piling in common use—one known by the name of close piling, the other called grooved and plank piling. Close piling is executed in the following manner:—The piles having been driven into the ground close together, are made fast at the top by bolting to them longitudinally two strong pieces of timber, technically termed wailing pieces, one on each side; bolts, however, are only driven through every fourth or fifth pile. In grooved, or planked piling, the piles are grooved across, and planks of timber introduced into the grooves. This method gives great neatness to the dam, and generally supersedes the necessity of puddling with clay. It is not, however, remarkable for security. In both cases the lower ends of the piles are sharpened or cut in a pyramidal form, and shod with iron; and the upper extremities are encompassed with a ring of the same metal, to prevent their splitting by the force of the iron ram by which they are driven into the earth. The mode followed in the construction of the coffer-dams at the new London Bridge differed somewhat from both of those just described. In consequence of the bed of the river at the site of the bridge being upwards of thirty feet in depth at low water of spring tides, and the current being at all times extremely rapid, it was found necessary to have recourse to several additional expedients to give the coffer-dams sufficient strength to keep out the water. The general form of the dam was elliptical. Three rows of piles, dressed in the joints and shod with iron, many of them measuring from eighty to ninety feet, were driven into the ground; and after being firmly bolted together in the way before described, were puddled with clay. Wooden stays, or props, were then introduced between the different rows of piers, and the whole of the interior space strongly truss-framed in a diagonal manner; and the longitudinal beams were firmly strapped together, forming at their joints abutments for the braces. Stairs were formed for descending into the coffer-dam, and pumps were fixed to raise the water arising from springs or leakage. Within this enclosure the pier of solid masonry was erected." The lowermost course of masonry was laid on piles of beech driven in the interior of the coffer-dam to a depth of nearly twenty feet. Notwithstanding the resistance of the water to this coffer-dam it was generally dry, and the steam-engine and pumps were rarely used.

The cut represents the operations within a coffer-dam, formed for the purpose of carrying on the repair of the decayed parts of Blackfriars Bridge. The workman pursues his labours with as much comfort in this coffer-dam as under any open shed erected on dry ground.

London Bridge is built of granite, Waterloo Bridge of Cornish granite, and Blackfriars Bridge of Portland stone, a material which becomes soft and friable when exposed for a great number of years to a moist atmosphere or the alternate action of air and water. Hence the bridge gradually became dilapidated. Engineers were employed to examine it, and having made an unfavourable report as to its state, it was determined to apply for an Act of Parliament for authority to undertake the repair of this important thoroughfare. An estimate laid before the Common Council in April, 1833, fixed the cost of repairing that part of the bridge above low water at 60,000*l.*, and of piling, coffer-dams, and securing the foundation at 30,000*l.* The restoration of the decayed parts of the bridge have now been going on above two years. It is intended to case the piers with piles covered with masonry. The quantity of timber required for the fifth pier is 30,000 cubic feet, and each pier will require a casing of 10,000 cubic feet of granite. In the course of making these improvements and repairs, four coffer-dams will require

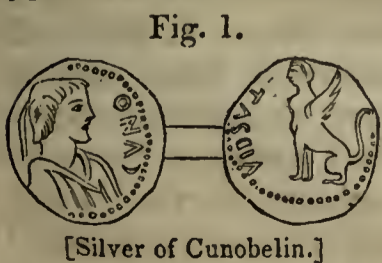
to be formed. It is intended to remove the present balustrade, and to substitute a plain parapet, somewhat similar to that of London Bridge. The approaches to the bridge will be made less steep both on the Surrey and city side. This is an alteration which has long been greatly needed, as every one will be aware who has been in the habit of crossing the bridge and witnessed the frequent obstructions which occur in ascending or descending the extremities.

ENGLISH COINS.

THE word coin (Latin *moneta*, *nummus*, German *munze*, *Geld*) is supposed by Sir Edward Coke (Coke on Litt.) to be derived from the Greek word *κοινος*, that is *communis*, because it is commonly made use of in all affairs; it is a piece of metal impressed in various ways for circulation by order of a prince or state, and it is requisite that the pieces coined should be of the same weight and fineness, and that a certain denomination should be given by authority to each species of coin.

The figure of English money is always round, except the Newark shilling of Charles I. and some few other coins. When Cæsar invaded Britain, he said of the natives "they make use of brass instead of golden coin, or iron rings reduced to a certain weight instead of coins;" and Speed avers that he himself had seen little earthen cruses or pitchers dug out of the ground which contained rings of iron and plates of brass assized at a certain weight. Rude coins of copper, mixed with tin, are frequently found in this country: they are of the size of a didrachm, the usual form among the ancients of the *nummus aureus*.

There are undoubtedly British coins prior to Julius Cæsar, but they cannot be, with any degree of certainty, ascribed to individual monarchs. The British coins are known by their particular forms, being commonly embossed outward and shield-like, on which the inscription is seen with a hollow reverse, within which is set their device, a form used by no other nation except among some of the Grecians: the most ancient of the British coins are impressed on one side only, and have a device without any legend. Those which have an obverse and reverse are also without legend, except *SEGO* [nax] and *CUNOBELIN*. The earliest coin (according to Fosbroke) which can, with any probability, be attributed to any particular British monarch, has on it the letters *SEGO*, probably for Segonax, one of the four Kentish kings, who by command of Cassevelin attacked Cæsar's camp upon his second arrival in Britain. There are many coins of Cunobelin (the British Museum having a fine collection formerly belonging to Sir Robert Cotton), who was king of the Trinobantes: it is said that he was educated in the court of Augustus and was tributary to the Romans: he resided at Camulodunum, which is supposed to be now Malden in Essex; and according to some authors, he was commander of the Britons in their wars against Cæsar. These coins of Cunobelin are only probably British, for the portraits, sizes, and seeming age, vary so much, that it is conjectured that they cannot all belong to this Cunobelin, though the types are evidently Roman. Most of those yet discovered have *CUNO* upon one side with an ear of wheat, a horse, a kind of head of Janus, or some such type, and often *CAMO*, supposed to be Camulodunum,



[Silver of Cunobelin.]

upon the other side, with a boar or tree or other symbol. (Fig. 1*) is a coin of Cunobelin, which bears on the reverse *TASCIA*, a word of which various explanations are given by antiquaries, but none in any

* The coins are all represented of the exact size.

degree certain. The coins of Cunobelin are most frequently formed of copper, but some are of gold, silver, and electrum (which is gold, with a fifth part or more of silver).

The Britons were so entirely subdued under Claudius, that the Roman imperial edict ordaining all money current among them to bear the imperial stamp, was strictly enforced, and no British money appears afterwards. Ruding says that no Roman coin bearing the name of a British town has yet been discovered, though it is by some asserted that Constantine the Great had a mint in London, and Camden states that he had seen copper coin of that date with this inscription, *P. London. S. (Pecunia Londini Signata)*. On the earliest of the Roman imperial coins, Britain is represented by a female figure sitting on a globe with the *labarum*, the symbol of military power, in her hand, and the ocean rolling at her feet. Figures 2 and 3 represent the

Fig. 2.



[Reverse of Antoninus Pius. Brass.]

Fig. 3.



[Reverse of Antoninus Pius. Brass.]

reverses of two coins of Antoninus Pius, which with slight variations are the type of the present copper coinage. As many as twenty Roman coins have been struck at various times relating to Britain, while those personifying Italy, Gaul, Spain, and other regions of the empire do not exceed four or six at the most for each country. The circulation of Roman coin continued in this country, according to some antiquaries, 300 years, according to others, 500 years, but it is now generally admitted that the Romans finally left Britain in the reign of the Emperor Honorius.

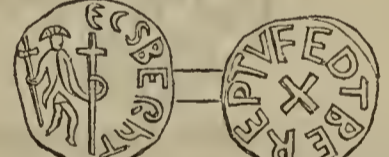
The silver skeatta or penny (figs. 4 and 8) a coin of

Fig. 4.



[A silver skeatta.]

Fig. 8.



[Silver skeatta of Egbert, King of Kent.]

the Heptarchy, appears as early as the sixth century: it was probably brought from the continent by the Anglo-Saxons. Most of the skeattas, as is denoted by their symbols of serpents and other rude figures, were struck in the time of Paganism; but some of the later ones have legends. The precise value of the skeatta is unknown, but they were coined in Kent and the early Heptarchic states, from the sixth to the eighth century. Fig. 8 is a skeatta of Egbert, king of Kent, A.D. 664, who was renowned for his encouragement of learning. Another coin of this period is the billon styca (Figs. 5 and 6). Billon is copper washed with silver, and the

Fig. 5.



[Copper Styca of Redwulf, King of Northumbria.]

Fig. 6.

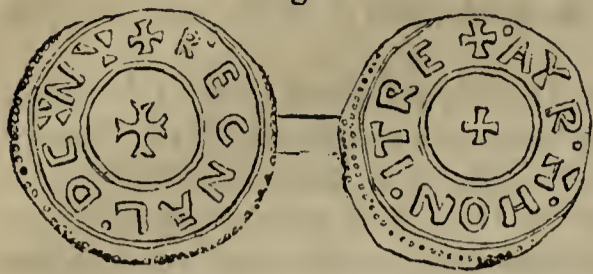


[Copper Styca of Osbrecht, King of Northumbria.]

styca is supposed to have been equal in value to about half a farthing. They are only known of the later period of the kingdom of Northumbria, or of the Archbishops of York: they are the *Minuta* of Domesday

Book, whence the modern word mite. The exact time

Fig. 7.

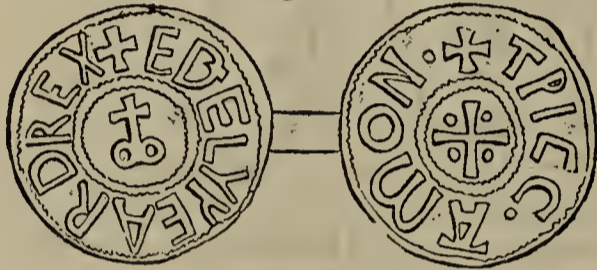


[Silver Penny of Regnald, King of Northumbria.]

of the introduction of the silver penny, properly so called, is unknown; the Heptarchic pennies are almost all of the eighth century. The first of them is that of Ethelbert II., between the years 749—760. Besides these, there was the Half-ling, or Half-penny, of silver, as was probably the Feorth-ling, or Feopðvng, the fourth part, or farthing. All these coins, except the farthing, are found, and it is conjectured that there was the Triens, which divided the penny into three equal parts.

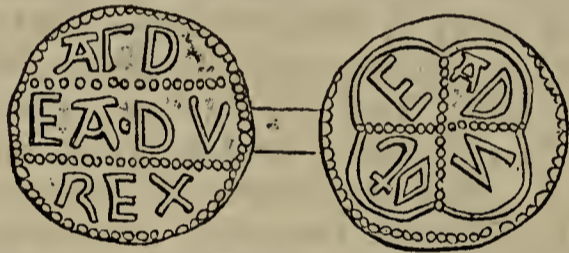
There are many Heptarchic pennies found; for specimens of some of them see Figs. 7, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19. Fig. 10 is a coin of Æthelweard, who is said by some to have been king of the West Saxons, while others suppose that he was an unknown king among the East Angles: 249 of his coins were

Fig. 10.



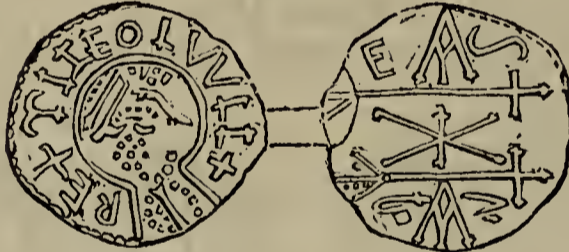
[Silver Penny of Æthelweard.]

Fig. 11.



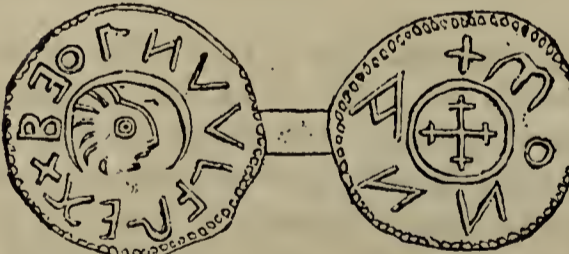
[Silver Penny of Eadwald, King of Mercia.]

Fig. 14.



[Silver Penny of Ceolwulf, King of Mercia.]

Fig. 15.



[Silver Penny of Beornwulf, King of Mercia.]

Fig. 16.



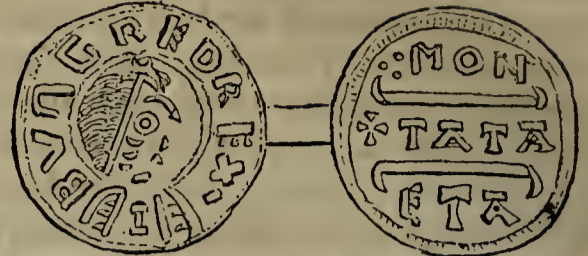
[Silver Penny of Wiglaf, King of Mercia.]

Fig. 17.



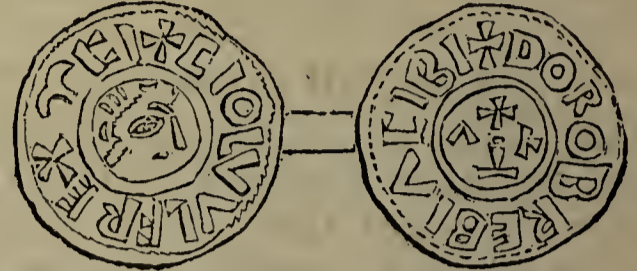
[Silver Penny of Berhtulf, King of Mercia.]

Fig. 18.



[Silver Penny of Bvrgred, King of Mercia.]

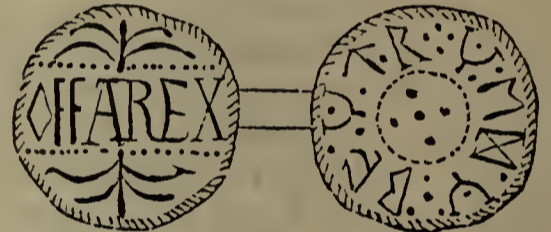
Fig. 19.



[Silver Penny of Ciolvulf, King of Mercia.]

found at Dorking in Surrey in 1817. On a coin (Fig. 19) of Ciolvulf is the place of mintage, Dorobernia, or Canterbury; the ancient historians are so confused and contradictory, that it is impossible accurately to fix the exact order of the date of the Heptarchic pennies; their resemblance to each other in rudeness of execution is in general considerable, and their uncouth portraits scarcely afford the semblance of a human countenance. In the series of Anglo-Saxon coins, none are equal in interest to those of Offa, king of Mercia, a prince so considerable, that he enjoyed the friendship and alliance of Charlemagne. His coins are executed in a style of drawing without parallel in the money of this country, from the time of Cunobelin to the reign of Henry VII. The types of the reverses

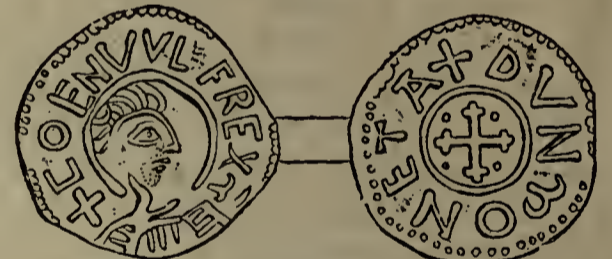
Fig. 12.



[Silver Penny of Offa, King of Mercia.]

are extremely numerous. Fig. 12 is a penny of Offa, bearing a Runic legend, which is supposed to signify the name of Botred, who was a moneyer or officer of the mint of the Heptarchic period. It is remarkable that we find the workmanship of the coins of Coenvulf (Fig. 13), the successor of Offa, much deteriorated. The Mancus, the Mark, the Ora, the Shilling, and the Thrimsa, are supposed to have been only money of account, and not actual coins; but a mancus, according to Hume, on the authority of Spelman, was about the weight of our present half-crown, and three hundred mancuses were granted by Ethelwulf, father of Alfred, to the Pope; one-third to support the lamps of St. Peter's; another those of St. Paul's; and a third to the Pope himself. If the mancus was ever current, it was probably of foreign mintage. The mark was two-thirds of the money pound in value, and in 1309 the pensions allowed by the king to the cardinals and great officers of the Pope, who were, as it were, retained by the court of England, were to some a hundred, but to most of them fifty marks per annum. It is conjectured that ora signifies *uncia*, but Spelman says that ora was also a piece of money valued at sixteenpence, for which he cites this passage: "Plac. coram Rege T. Mich. 37 H. 3. Rot. 4. The men of Berkeholt Com. Suffolc. say that in the time of king Henry, the grandfather of our present lord the king, they had a custom that when they would marry out their daughters, they were wont to pay for leave so to do two ora, which are valued at thirty-two pence." It is asserted that the thrimsa was fourpence of Saxon money. Besides the ecclesiastical

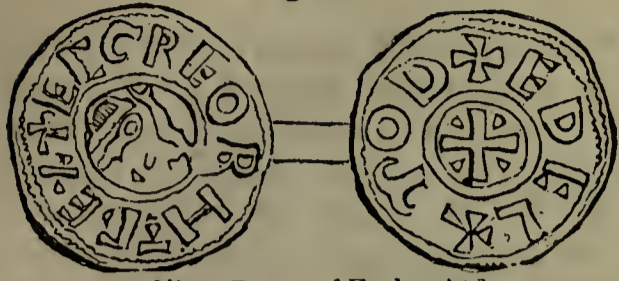
Fig. 13.



[Silver Penny of Coenvulf, King of Mercia.]

coins, there are those of Sihtric and Anlaf of Northumbria, who were petty monarchs not subdued by Egbert: those of Anlaf bear the Danish ensign, the famous raven. The coins of the chief monarchs display almost

Fig. 20.



[Silver Penny of Egbeorht.]

Fig. 21.



[Silver Penny of Ethelwulf.]

an entire series from Egbert (Fig. 20), A. D. 832. There being none of Ethelbald, and Edmund Ironside breaks the series. Fig. 21 is a penny of Ethelwulf or Ethelwulf, father of Alfred. Most of the coins of this period have rude portraits, and the reverses are sometimes interesting: one of Edward the Elder has the cathedral of York, with three rows of windows round, arched. The inscriptions are occasionally curious, as on Egbert's coins, SAXONVM for Anglorum, and on Ethelwulf, SAXONIORVM. Pennies of Athelstan bear REX TOT. BRIT., or Totius Britanniae, probably struck after his defeating Constantine King of Scotland. Fillets of pearls and crescents distinguish the Anglo-Saxon kings of the Heptarchy; and rude kinds of crowns, with rays and pearls, are mixed with fillets among the sole monarchs. The sceptre first appears on coins of Ethelred II. (See Pl. 22 of Ruding's Saxon Series.) The reverses of the royal Anglo-Saxon coins are nearly all names of moneys and mints, but monograms occasionally appear; and on several coins of Ethelred II. (see Ruding's Pl. 22.) is the hand of Providence, with the letters A and Ω, supposed to be the only instance in which Greek characters occur on any coins of the Anglo-

Fig. 9.



[Silver Penny of Ceolnoth, Archbishop of Canterbury.]

Saxon monarch. Fig. 9 is a penny of Ceolnoth, Archbishop of Canterbury, as a specimen of one of the many ecclesiastic coins of this time. The moneyer, or officer of the mints, putting his name on coins, was a practice unknown till the sixth century. It was introduced, by degrees, a century after the Roman mints had ceased with that empire in Europe, and when private persons contracted with the monarchs for the small mints, and put their names to identify their mintage. Till Athelstan, there are only names of moneyers, except on a few coins of his predecessors, Alfred and Edward the Elder, where we find the towns added, a practice general after the time of Edward the Martyr. The use of the hammer in fabricating money was of very easy management, and attended with very little expense—hence the number of moneyers whose names appear on the early coins. A remarkable circumstance attending hammered money is the tenuity and large size in respect of the value, in consequence of which no relief could be easily given to the impressions. Coins of genuine antiquity are sometimes found split on the edges, or even in the centre, from the force of the hammer. Three or four hundred moneyers were employed at a time in the Anglo-Saxon mints, and they occasionally travelled about with the kings to coin money on emergencies. There are instances where the names of two moneyers occur on the same coin. The last example of the ap-

pearance of a moneyer's name is in the reign of Edward I. Under the Saxon kings, money was coined in London in eight different places; at Canterbury, seven, four being for the king, two for the archbishop, and one for the abbot; at Rochester, in three places; at Winchester, six, &c. In a close roll of Edward I., there is an account of a mint with thirty furnaces, in the Tower of London; another with eight, at Canterbury; four at Kingston-upon-Hull, &c. In the reign of Queen Elizabeth, no mint was allowed, except in the Tower of London, which practice was continued, till the civil wars compelled Charles I. to coin money at Oxford, York, Aberystwith, Exeter, Newark, Pontefract, and other places. His necessities obliged him to establish numerous mints. Money was afterwards again ordinarily coined at the Tower till the erection of the present Mint within these few years. The cross, the use of which on coins is said to owe its origin to Constantine the Great, appears frequently on Saxon coins, and in the Norman reigns it is asserted to have been so deeply impressed, that the coins might be divided into halves for halfpence, and quarters for farthings: which practice, says Hoveden, continued till the time of Henry I. Leake denies this; but there is a passage in Whitaker's Richmondshire, which shows that coins were actually halved and quartered for currency. Stow says, "the penny was wont to have a double cross with a crest, in such sort that the same might be easily broken in the midst, or into four quarters. It was now ordained (Edward I.) that pence, halfpence, and farthings should be made round, whereupon were made these verses following:—

"Edward did smite round penny, halfpenny, farthing;
The crosse passes the bond of all, throughout the ring:
The king's side, was his name written;
The crosse side, what city it was incoined and smitten.
To poor man, ne to priest, the penny fraves nothing,
Men give God ay the least: they feast him with a farthing.
A thousand, two hundred, fourscore years and mo,
On this money men wondred, when it first began to goe."

Scarcely a find of Saxon, and more particularly Norman coins occurs, in which halves and quarters of the penny are not found, cut with the greatest exactness.

[To be continued.]

THE HEMLOCK OR CROMLECH STONE NEAR NOTTINGHAM.

IN descending the hill from Risby toll-gate towards Sandyam, on the road from Derby to Nottingham, the observant traveller will be struck with the singular appearance of the prospect before him, and he will not fail to remark that, in its general features, particularly in the distant parts towards the left hand, it very much resembles some of those scenes we have seen pictured by our missionaries abroad. A high ridge of land covered with firs and larches, and other trees of loose ramification, just cutting the horizon with their slight open foliage,—a deep shady wood on another ridge,—and, between them, an apparently barren knoll, bearing on its summit a singularly-shaped rock,—give to the whole an appearance completely foreign; and the unshaped pile becomes a resemblance of one of those monstrous idols still worshipped by barbarians.

This fragment of rock lies at the distance of about three miles from the point where it is first observed, and may be visited by turning through the toll-gate at Whanscote House and proceeding about three-quarters of a mile along the road, when it bursts suddenly on the sight, on a high bare hill to the right hand, and but at a few hundred yards' distance. Its appearance

now is singularly imposing; and the observer feels satisfied that it is a monument of antiquity, and that it must, at some period, have been the scene or the object of religious veneration.

In the neighbourhood, this remarkable fragment is known by the name of the "Hemlock Stone." It, I have no doubt, was originally called the "Cromlech," or "Crumlech Stone,"—a name which at once points out its original use. The provincial pronunciation of *hemlock* is *humlock*: the transition from *crumlech* to *humlock* is natural and easy; but, as if to divest it of vulgarity, and confine to the plant its distinct appellation, it is now universally called, as before mentioned, the "Hemlock Stone."

This stone lies about five miles from Nottingham; and the ridge on which it stands is of the same conformation as the rock on which Nottingham Castle is built,—as that in which the various caves are scooped in the park, and, in fact, similar to the ground on which the town itself is situated. It is a huge piece of a reddish rock, of perhaps fifty feet high, presenting on one side a broad flattish face, and at each end an appearance not much dissimilar to the Cheese-wring of Cornwall. It is full of seams and crannies, but yet appears to be one connected, if not entirely compact, stone. The top projects over the sides and ends very considerably, and has a gentle slope of its plane summit towards the east. This, if it does not prove it to have been a cromlech, shows at least its possessing one of its most distinguishing properties. It is evidently a work of Nature; and in its present state, independently of whatever may have been the use to which it has been put to, is an object not devoid of picturesque beauty.

It appears highly probable that it has been a druidical altar; for it stands on the sloping side of a hill, commanding an extensive view of a plain in which thousands might assemble, and was overlooked by two other hills of something greater altitude, not unlikely at the time, covered with a wood of native oaks; and it was within a little distance of the druidical residence in Nottingham Park: besides, as there was not a place of sacrifice nearer than those on the Peak Hills, in the neighbouring county of Derby; such a place would of necessity be wanting. It seems therefore natural to conclude that it has been used for such a purpose.

It is singular that none of our tourists and few of our topographers have so much as mentioned this cromlech-stone: perhaps its lying at a little distance from the road, and not being in sight, except at three or four miles' distance, may have been one reason; yet I feel convinced that, had such a monument stood on the summit of one of the hills of Wales, or Cornwall, or Devonshire, it would long ago have attracted the notice of our travelling antiquaries.

The stone itself is entirely void of verdure, except having on the top a small straggling sloe-bush, and, a little below, a few small tufts of polypodium. It is not much enriched with lichens and weather-tints; but from its dark enormous mass projecting against the light horizontal sky, and the well-wooded distance contrasting with the flowers of the luxuriant furze-bushes in the fore-ground, it forms a picture to which its singularity adds an interest.

THE LABYRINTH OF CRETE.

IN a recent article, while treating of Grecian dresses and dances, we had occasion to allude to this extraordinary excavation, which was once classed among the wonders of the world, and was supposed to be of the remotest antiquity. A short description of the

labyrinth, or at least of the excavation which is generally supposed to be the ancient and famed work (for there are some doubts on the subject), may amuse our readers, and give them an excellent field for conjecture as to the uses and object of a work of such labour and extent.

In the island of Crete, which is now called Candia, upon the side of a mountain forming one of the roots of Mount Ida, and at the distance of four miles from the town of Agiosdeka (the ancient Gortyna), there is an opening somewhat in the shape of a mouth, of a man's height, and no way distinguishable from many apertures in the neighbourhood. But this common-looking entrance leads to passages beautifully cut out in the rock, which twist and turn, diverge from, and intersect each other in so puzzling a manner, that, without a clue, or great precaution, it seems almost impossible for a person once engaged in them to find his way out again. Nearly the whole of the mountain is cut through and through by these subterranean mazes, which, from their irregularity, appear rather as the effect of chance than the designed work of man. When the old French traveller Tournefort visited the place, every one of the party carried a torch: at every difficult turn they stuck up, on the right-hand side, pieces of paper marked with numbers; one of the guides lighted faggots made of the branches of the pine-tree, and left them to burn at certain distances from each other, and another guide scattered pieces of straw on the ground as they went along. And yet, with all these precautions, it should appear that Tournefort was able to explore only a part of the labyrinth. A more recent traveller (the Honourable F. S. North Douglas) undertook the task with a great many guides, furnished with torches and lanterns, and 1300 yards of packthread; but he too was obliged to leave many of the windings unexamined, and to abstain from entering some high and broad passages that seemed calculated to entice and then bewilder him.

Immediately beyond the entrance to these caves there is a small chamber, to the right of which there runs a passage which is 3300 feet long, and on an average 12 feet wide and 10 feet high, though Tournefort says that in some places he was obliged to stoop a little, and that at one point, about the middle of the road, they found the passage so low and so narrow, that they were obliged to crawl on their hands and knees, one by one. This passage neither ascends nor descends very much; the floor is smooth and level from side to side; the walls or sides are perfectly perpendicular, and formed of the solid rock, except here and there, where they are cased with masonry most carefully executed. At every ten or twelve paces new passages of the same sort present themselves, and they, in their turn, either break off into other passages, or return to the original passage from which they had diverged. After an apparent progression in this subterranean puzzle of nearly an hour, Mr. North Douglas's party, who thought themselves in the very heart of the mountain, came back upon their packthread at the very place whence they had started. This gentleman remarked as a striking peculiarity, that, instead of finding any close or unwholesome air in these narrow recesses, they breathed as freely when they were nearly a mile from its mouth as when they first entered the labyrinth. He also observed that all the angles in this singular excavation were as sharp as if they had just been cut. In one of the passages he, with great difficulty, discovered, through a narrow aperture, a small octagonal room, remarkable for the elegance of its form. Tournefort speaks of two small chambers, almost round (*presque rondes*), cut in the rock, at what he considered the most distant or innermost part of the labyrinth. On

the walls of these rooms he found several names of visitors, which had been written with charcoal during the time that the Venetians were masters of Candia. He copied two or three of these; for example:—"Qui fu el strenuo Signor Zan de Como, Cap^{no}. dela Fanteria, 1526." (Here was the bold Signor Zan de Como, a captain of infantry.) "P. Francesco Maria Pesaro, Capucino (a Capuchin friar); Frater Taddeus Nicolaus (another friar), 1539." In these rooms, and in the passages leading to them, were several other dates (written or cut out by the chisel), ranging from the year 1495 to 1579, and Tournefort added 1700, the year of his visit. According to this correct old traveller, the most tortuous and difficult part of the labyrinth is that which branches off to the left, at about thirty paces from the entrance, where an infinitude of passages, some crossing each other, and some having no outlet, perfectly bewilder the explorer. Sandys, who visited the island of Candia more than two centuries ago, but whose curiosity did not lead him to the labyrinth, tells us, that he "had heard an English merchant (who hath seen it) say, that it was so intricate and vast, that a guide which used to show it unto others for twenty years together lost himself therein, and was never more heard of." There is no water dripping through the rocks, no congelation of any kind, but, throughout, the labyrinth is dry, and the air of an equal and pleasant temperature.

According to the early part of Grecian history or tradition, where fable is mingled with fact, or nearly everything is to be taken in an allegorical sense, the key to which we have lost, the labyrinth was made, in imitation of a similar work in Egypt, by Dædalus the Athenian, for the second Minos, King of Crete, who flourished some thirteen centuries before the Christian era. The story of the monstrous Minotaur that ranged through these recesses, and of Theseus who was shut up in them to be devoured, and of the fair Ariadne who extricated her lover by giving him a clue of thread, belongs to the most imaginative part of mythology, and will hardly assist us in conjecturing what the place was really intended for. It has been called a catacomb, but no remains of any kind, indicating that it was put to such a use, have ever been found in it or about it. "The labyrinth," says Mr. North Douglas, "could never have been intended for a burial place, as we find none of those recesses in the walls which were used as sepulchres in the catacombs of Italy and Malta, nor indeed any other place fitted for the reception of a corpse." Belon and other old travellers concluded it was merely a stone quarry. Sandys says, "but by most this is thought to have been but a quarry where they had the stone that built both Cnossus and Gortyna; being forced to leave such walls for the support of the roof, and by following of the veins, to make it so intricate."

A modern traveller, Monsieur Sonnini, who, however, like Sandys, never visited the labyrinth, adopts this opinion, and unnecessarily refers the quarry to a much more modern date. Mr. North Douglas who, Theseus-like, explored the passage with a clue of thread in 1812, objects to these conclusions. He says, "Independently of there being no city nearer to it than Gortyna, which in comparatively modern times could never have required so large a quantity of materials, is it likely that there would have been such extreme regularity of design, such handsome chambers and entrances, and above all, such artful intricacy, so evidently intended to mislead, if the object had been a mere stone quarry? The traditions of the country-people, among whom it still bears the name of Ο Λαβυρινθος, (the labyrinth) seem to confirm its antiquity; but its precise object, though it clearly enough appears to have been in-

tended, generally, for purposes of concealment, must yet remain a matter of doubt."

Tournefort had already rejected as an absurdity the idea of the place being a quarry. He says the stone has nothing peculiar to recommend it—that precisely the same material is found in the hill directly above Gortyna, and close to Cnossus. Was it then probable that people would seek at a distance across rude mountains and deep valleys for what they had close at hand? Would they make a choice of all kinds of difficulties, rather than cut the stone on the spot they wanted it, and where there were no difficulties at all? After a good deal more to the same purpose, Tournefort concluded that the labyrinth was originally the work of nature,—a *lusus naturæ*, but that man, whose handiwork is everywhere visible in it, had taken delight, or had found some advantage in enlarging it where it was narrow, and in giving regularity to its sides, roof, &c. "The ancient Cretans," he continues, "a people highly civilized and much attached to the fine arts, were disposed to finish what nature had only sketched out. Without doubt some shepherds having discovered these subterranean passages, gave room to greater men to make out of them this marvellous labyrinth, which might serve as an asylum to many families, during civil wars or the reigns of tyrants, although they now only serve as a retreat to the bats." He might have added that in ages when robbery and violence were held to be heroic virtues, and the seas of Crete swarmed in an especial manner with pirates, the people flying from the coast at times would be happy to have so excellent a hiding-place for themselves and their goods.

He conjectures that the ancient Cretans did not touch that part of the passage where it is necessary to crawl on hands and knees, because they wished posterity should know, by seeing it, how all the rest was made originally by nature, and how much their art and industry had done to improve it. Beyond that narrow passage the labyrinth is as regular and beautiful as it is before reaching that point. In support of Tournefort's hypothesis it should be mentioned, that many natural grottoes and long caverns exist in this volcanic island, and that Mount Ida, close by, is in many places quite honey-combed with them.

We will offer no conjecture of our own, but leave that pleasant field open to our readers. One thing is certain, that whether it be the labyrinth so often referred to by ancient writers (and we are inclined to think it is) or whether it be wholly, or only in part, the work of man, the labyrinth visited and described by Tournefort and Mr. North Douglas, is an exceedingly curious and interesting place.

The latter gentleman was of opinion that the primitive meaning of "labyrinth," which he thought was a word of Phœnician origin, might assist us in discovering something of its history and uses.

CAPACITY OF THE CHEST, AND ITS CONDITION DURING BODILY EXERTION.

(From Sir C. Bell's *Dissertations in the new edition of 'Paley's Natural Theology.'*)

SUPPOSE a machine formed of two boards of equal diameter, and joined together by leather nailed to their margins like a pair of bellows: a hole is made in the upper board into which is inserted a tube. Now if a person mount upon this apparatus when it is filled with water, and blow into the tube, he can raise the upper board, carrying himself upwards by the force of his own breath—indeed by the power of his cheeks alone. It is on the same principle that, when a forcing pump is

let into a closed reservoir of water, it produces surprising effects. The piston of the hydraulic press being loaded with a weight of one pound, the same degree of pressure will be transmitted to every part of the surface of the reservoir that is given to the bottom of the tube, and the power of raising the upper lid will be multiplied in the proportion that its surface is larger than the diameter of the tube. Or, to state it conversely: suppose we had to raise the column of water in the tube by compressing the reservoir, it would require the weight of a pound on every portion of the superficies of the reservoir equal in extent to the base of the piston, before the water could be raised in the tube. If the apparatus which we have described were full of air instead of water, we should witness a similar effect; for all fluids, whether elastic or not, press equally in all directions; and this is the law on which the phenomenon depends. If we blow into the nozzle of a common pair of bellows, it is surprising what a weight of books we can heave up if laid upon its board.



Understanding, then, that the power of the hydraulic press, in raising the lid, depends on the size of the reservoir, and its relation to the tube; and again, that in pressing the fluid up through the tube, the pressure upon the sides of the reservoir must be the greater the larger the cavity, we can conceive how a glass-blower propels the air into his blow-pipe with great ease, if he blows with the contraction of the cheeks, the smaller cavity; but with an exhausting effort, if he blows by the compression of the larger cavity, the chest. Dr. Young made a calculation, the result of which was, that in propelling the air through a tube of the same calibre; a weight of four pounds operating upon a cavity of the size of the mouth would be equal to the weight of seventy pounds pressing upon a cavity of the dimensions of the chest*.

* The action of one who uses the blow-pipe is rather curious. The mouth is distended with air, and the passage at the back of the mouth closed; the man breathes through the nostrils, but from time to time admits a portion of air into the mouth in expiration. The pressure into the blow-pipe is from the distension and consequent elasticity of the cheeks, occasionally assisted by the buccinator muscle, or trumpeter's muscle, so called because it compresses the distended cheeks. In this way the stream of air through the blow-pipe is kept up uninterruptedly, whilst the man breathes freely through his nostrils.



Let us see how beautifully this hydraulic principle is introduced to give strength in the common actions of the body. We have remarked that the extension of the superficies of the thorax is necessary to the powerful action of the muscles which lie upon it; and these are the muscles of the arms. We must all have observed, too, that in preparation for a great effort, we draw the breath and expand the chest. The start into exertion and of surprise, in man and animals, is this instinctive act. But unless there were some other means of preserving the lungs distended, the action of those muscles which should be thrown upon the arms, would be wasted in keeping the chest expanded. It is here, then, that the principle which we have noticed is brought into play. The chink of the glottis, which the reader has already understood to be the top of that tube which descends into the lungs, is closed by a muscle not weighing a thousandth part of the muscles which clothe the chest; and this little muscle controls them all. A sailor leaning his breast over a yard-arm, and exerting every muscle on the rigging, gives a direction to the whole muscular system, and applies the muscles of respiration to the motions of the trunk and arms, through the influence of this small muscle, that is not capable of raising a thousandth part of the weight of his body; because this little muscle operates upon the chink of the glottis, and is capable of opposing the whole combined power of all the muscles of expiration. It closes the tube just in the same way that the man standing on the hydraulic bellows can with his lips support his whole weight. Thus it is that the muscles which would else be engaged in dilating the chest are permitted to give their power to the motions of the arms.

Some cruel experiments have been made, and for whatever intended, they illustrate the necessity of closing the top of the windpipe during exertion. The windpipe of a dog was opened, which produced no defect until the animal was solicited by his master to leap across a ditch, when it fell into the water in the act of leaping; because the muscles which should have given force to the fore-legs lost their power by the sudden sinking of the chest. The experiment is sufficiently repugnant to our feelings; and I need not offend the reader by giving instances in further illustration from what sometimes takes place in man.

* * The Office of the Society for the Diffusion of Useful Knowledge is at 59, Lincoln's Inn Fields.

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RUINS OF A GREEK THEATRE AT SYRACUSE*,
WITH AN ACCOUNT OF THE ANCIENT GREEK DRAMA.



[Greek Theatre, Syracuse.]

THE engraving presents a partial view of some considerable remains of a Greek theatre at Neapolis, in Syracuse. It was hewn in a rock, and constructed with three ranges of seats separated by platforms or galleries, which continue without interruption all round, approached by staircases constructed at given intervals. This theatre was built at the boundaries of Neapolis, Tyche, and Acradina, overlooking the former city and commanding a view of the promontory of Plemmyrium†; while from its back may be seen the singular excavations in the quarries of Neapolis, among others that which is called the Ear of Dionysius.

This once glorious and animated scene, where multitudes assembled to witness and appreciate the sublime conceptions of the dramatists of ancient Greece, presents, at the present time, a strong contrast to its former grandeur. The curious traveller or weary shepherd are now its only visitors; and the same spot which was

formerly hallowed by the representation of the dramas of Æschylus and Euripides, now affords but a scanty pasturage for the flocks and herds of an ignorant peasantry!

The origin of the regular Greek drama is traced to Thespis and Susarion, both natives of Attica. The germ of it was nothing more than a song in honour of Bacchus, accompanied by dancing. A goat was awarded as the prize of the singer*. Thespis, on one of these occasions, first pointed out the dramatic path by introducing a second person, who recited some well-known fable or history—called an episode—and relieved the monotony of the choruses; while Susarion gave the first idea of comedy, by attacking the vices and follies of those who dwelt in cities, a species of satire peculiarly relished by the country people †. These

* Hence the derivation of the word tragedy,—*Τράγος*, a goat, and *ᾠδή*, a song, or *song of the goat*.

† Comedians were so called from wandering in the *κόμαι*, or villages.

* See Wilkins' 'Magna Græcia.'

† Now *Massa Oliveri*, in the Bay of Syracuse.

episodes, being a far more pleasing kind of entertainment than the odes in praise of Bacchus, (the dullness of which they were intended only to relieve,) gradually assumed so much consequence in the festivals, that it became a proverbial saying, to denote that which is nothing to the purpose,—“All this is nothing to Bacchus!”

The drama remained in its original form,—merely a chorus and episode performed on an open stage or itinerant cart,—until the great Æschylus, by the unaided force of his own genius, elevated the Grecian theatre from this undigested chaos to its “most high and palmy state.” It is fabled, that while asleep in a vineyard, Bacchus appeared to him in a dream and commanded him to write tragedies. His plays were acted on a stationary stage—a humble wooden scaffolding. He also introduced a second person in the episode, and thus became the originator of *dialogue*. He employed mechanism for the stage, embellished it with scenes, and obviated the expedient of smearing the actors' faces with wine-lees (which had been formerly adopted) by substituting masks. He also invented the *cothurnus* or buskin. These extraordinary efforts of combined genius, ingenuity, and perseverance, were hailed by the Athenians with delight, and from that time they became a dramatic people.

As the most brilliant period of the Greek drama was the time when her three great tragedians Æschylus, Sophocles, and Euripides flourished, a short sketch of their lives will afford some insight into the history of the ancient stage.

ÆSCHYLUS was born about 525 years B. C., and distinguished himself at the battles of Marathon and Salamis. He wrote seventy-seven pieces, seven of which are yet extant. After enjoying the respect and admiration of his fellow-citizens for many years, both as a soldier and poet, he retired to the court of Hiero, king of Syracuse; on account, according to some conjectures, of having been unsuccessful in the competition for the poetical prize with Sophocles; other authorities ascribe his removal to a charge of blasphemy having been brought against him for divulging some of the secrets of the Eleusinian Mysteries; but this could hardly have been the cause, for his three last plays, exhibited just before he left Athens, are extant, and contain nothing of the kind. Ancient historians are ever unwilling to attribute to their heroes an ordinary or common-place death; hence we are told that an eagle, poisoning a huge tortoise in the air, mistook the bald head of the venerable Æschylus for a stone, and, dropping the tortoise, ended the life of “The Father of Tragedy.”

SOPHOCLES (born 495 B. C.) is said, but not on very good authority, to have been the son of a proprietor of a manufactory of cutlery. He was distinguished for the grace of his person and elegance of his manners. Of the 120 tragedies attributed to him only seven remain; and these evince a riper judgment and a moral and intellectual taste of greater purity than either of his great competitors. The moral taste of Sophocles seems to have been of the most refined order, for the plays he has left inculcate truth, religion and virtue with peculiar earnestness. He lived to a very advanced age; and such was his devotion to the Muses, that, a little before he died, his sons, mistaking his extreme abstraction for insanity, petitioned the judges to allow them to manage his estates. Sophocles, to refute the charge, merely read the first choric song from his ‘*Œdipus in Colonus*,’ (which he had just completed,) and calmly asked if that was the work of a madman. The suit was instantly dismissed, and the poet retired amidst the warmest applauses. Scholiasts are at a loss for the precise cause of his death: some have choked him

with a grape-stone; others kill him with a transport of joy when bearing away his last poetical prize; and again it is said, that while reading aloud his own ‘*Antigone*,’ he began a speech of too great length for his weak lungs, and expired from the fatigue and the excitation.

EURIPIDES was born 480 B. C., and first studied philosophy under Anaxagoras, who, advancing as a theory that the sun was a ball of fire, and maintaining the unity of God, was banished for blasphemy. The characters in his dramas often indulge in philosophical speculations, which give to the dramas a stiff, scholastic turn usually reckoned not a little inconsistent with dramatic poetry. His early studies and close intimacy with Socrates may account for this peculiarity. This friendship did not fail to obtain for him many a reproach from the comic poets, who attributed the success of his works to the assistance of the great philosopher, and who accused him also of borrowing the scepticism and sophistry of the philosophers. Euripides was twice married; and it is said that the profligacy of his wives drove him to Macedon, where, walking in a wood in deep contemplation, he was torn to pieces by dogs. In Sicily, it would seem, Euripides was honoured with an admiration amounting to enthusiasm; for when the army of Nicias was placed at the mercy of the Sicilians, those prisoners who could repeat passages from his tragedies were set at liberty.

ARISTOPHANES has been elevated in the estimation of the critics so high above the other comic poets of Greece as to be the principal representative of the ancient classical comedy; he is indeed the only one of whom we have any perfect remains. The date of his birth is not exactly known, but in 427 B. C. he is called “almost a young lad.” So captivating was his society, that it was eagerly sought by the most eminent men of his age. All historians agree that he was a sad votary to Bacchus; and this possibly caused much unhappiness in his private circumstances. His works, while they censure and satirize the vices of his age, are equally esteemed for dignity of style and graceful elegance of versification. He found a great admirer in St. Chrysostom, who kept a copy of his works under his pillow. We are unacquainted with the manner of his death.

The chief peculiarity in the Greek drama is the chorus. This at different times consisted of different numbers of performers: but after the drama was tolerably well reduced to a settled code of rules, the tragic chorus commonly contained fifteen, the comic twenty-four, persons. Those in tragedy always represented a body of persons who were interested in the events of the piece; as for example, in the ‘*Agamemnon*’ of Æschylus, the chorus consists of Argive elders; in the ‘*Hecuba*’ of Euripides, of Trojan captives: in comedy the author's choice was more arbitrary. The presence of the chorus compelled, in some degree, the observance of those strict concords of time, place, and action, called the *unities*, although frequently much more time is supposed to elapse during a choric song between the acts than actually did elapse, and although of course it had a very minor influence on the unity of the action. It also explained the intricacies, and inculcated the moral of the fable.

When the chorus consisted of fifteen persons, they were ranged in three rows of five each. The choral songs were divided into *strophe*, *antistrophe*, and *epode*. It is believed that the strophe was accompanied by a dance or species of measured evolution.

As the Grecian actors wore masks, made to resemble as much as possible the persons they represented, of course the expression of their faces was entirely hid. They were also raised six inches above their ordinary

height by the high shoe or buskin, in accordance with a general notion that their heroes and demi-gods—mostly the subjects of their tragedies—were of gigantic stature.

So very strict and careful were the Greek dramatists concerning the performance of their works, that little was left to the judgment of the actor. Even the declamation and dialogue were set to music, and chaunted in a kind of recitative—accompanied by a lyre that sounded successively the fourth, fifth, and octave—intervals most frequently occurring in the intonations of the human voice during colloquial converse.

The theatre was a large uncovered building, capable of holding from 30,000 to 50,000 persons, who enjoyed the spectacle free of expense, and for whom various places were set apart, according to their station in the republic. The representations took place at the festivals of Bacchus, and always in the day-time, consisting of the works of those poets who contended for the prize, enlivened by music, dances, &c.

The Athenians were so passionately fond of theatrical exhibitions, that the scenery, decorations, &c., incidental to a favourite drama, were frequently enormous. Nor were they illiberal to their authors and actors. Polus, a celebrated performer, gained a talent (225*l.* or 240*l.*) in two days; and Sophocles was appointed to a command in the war against Samos, on account of the popularity of his 'Antigone.'

We shall conclude by extracting a lively description of the representation of Sophocles' 'Antigone,' from the travels of Anacharsis, by Père Barthelemy, whose work, although purely one of fiction, and not remarkable for extreme accuracy, will in this instance afford a good general idea of a dramatic representation in a Grecian theatre.

The supposed traveller arrives at Athens during the grand festival of Bacchus, which, according to Dodwell, began on the 8th of April, 362 years B.C.

"I have just been to see a tragedy, and in the confused state of my ideas hastily commit to paper the impressions it has made upon me. The theatre opened at break of day; I went thither with Philotas. Nothing can be imagined more grand and striking than the first view. On one side we see the stage ornamented with scenes executed by the ablest artists; and on the other a vast amphitheatre, lined with seats rising one above the other to a very great height, with landing-places and stairs, which, lengthened out and intersecting each other at intervals, facilitate the communication, and divide the seats into several compartments, some of which are reserved for particular communities and classes of citizens.

"The people flocked hither in crowds; they kept coming and going, ascending, descending, shouting, laughing, pressing, and pushing each other, and braving the officers, who were running about on all sides to maintain order. Amid this tumult the nine archons, or chief magistrates of the republic, the courts of justice, the senate of five hundred, the general officers of the army, the ministers of state, successively arrived. These different bodies occupied the lower seats. Above them were placed all the young men who had attained their eighteenth year. The women were stationed in a place that kept them at a distance from the men and the courtizans. The orchestra was empty. That was set apart for emulative contests in poetry, music, and dancing, which take place after the representation of the pieces; for here all the arts are united to gratify all tastes.

"I saw some Athenians who had purple carpets spread under their feet, and were luxuriously lolling on cushions, brought thither by their slaves; others who before, after, and during the representation called for wine,

fruit, and cakes; others again who briskly stepped upon the benches to choose a commodious place, and take it from the person then occupying it. 'They have a right to do so,' said Philotas; 'it is a distinction they have received from the republic as a recompense for their services.'

"Observing that I was astonished at the number of the spectators, he told me they might amount to about 30,000; 'the lists are about to be opened with the Antigone of Sophocles. You will have the pleasure of hearing two excellent actors, Theodorus and Aristodemus.'

"Philotas had scarcely ended, before a herald, after commanding silence, proclaimed, 'Let the chorus of Sophocles advance!' This was to announce the piece, and a perfect silence ensued. The theatre represented the vestibule of the palace of Creon, King of Thebes."

The remaining portion of the description is occupied with a detail of the acting and characters in the Antigone, which would only be interesting to those well acquainted with the tragedy.

ENGLISH COINS.

[Continued from No. 275.]

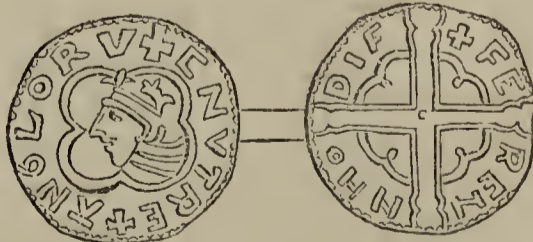
MONEY is spoken of in several places in Shakspeare under the name of crosses. The consideration of the value of the money current in ancient times is attended with considerable difficulty, and requires a knowledge of the population, the quantity of commodities possessed by the country, and various other circumstances. In the Saxon period it is supposed that five shillings went as far as five pounds now; but this was owing to the frugality and style of living, and not to the scarcity and high value of the circulating medium, or surely smaller coins would have been required than the penny divided into four. The conquest of England by the Normans made no alteration in the only circulating coin, the old English silver penny, or Sterling, which was known all over Europe in the middle ages, and which excelled, in neatness of fabric and purity of metal, the Italian and French coins of that period. The series of English coins is considered to be more complete than that of any other country in the world: of the English pennies since Egbert—during upwards of 1000 years—not above two reigns are wanting.

Fig. 22.



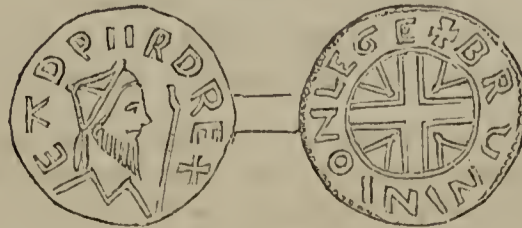
[Silver Penny of Eadgar, King of England.]

Fig. 23.



[Silver Penny of Canute. Struck in Dublin.]

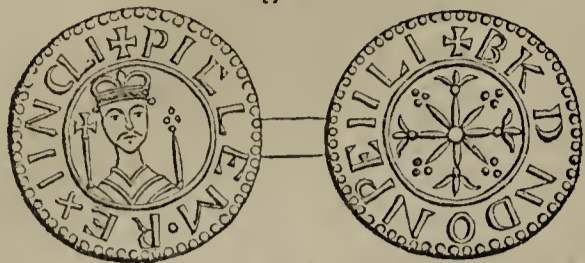
Fig. 24.



[Silver Penny of Edward the Confessor.]

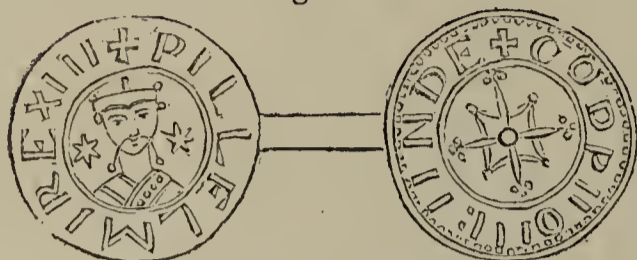
The pennies of William I. and II. (Figs. 25 and 26)

Fig. 25.



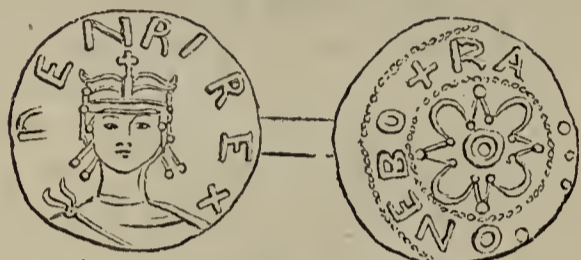
[Silver Penny of William the Conqueror.]

Fig. 26.



[Silver Penny of William Rufus.]

Fig. 27.



[Silver Penny of Henry I.]

are not now easily distinguishable from each other.

Fig. 30.



[Poitou Penny of Silver.—Richard I.]

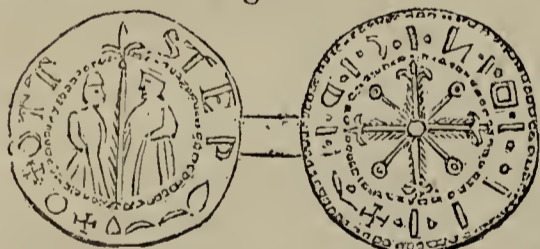
Fig. 31.



[Silver Penny of John.]

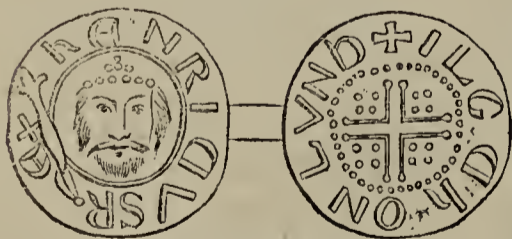
Of John (Fig. 31) there is only Irish money.

Fig. 28.



[Silver Penny of Stephen.]

Fig. 29.



[Silver Penny of Henry II.]

exercise, as well as the right of coining, has remained in the crown; for though the crown allowed several ancient bishoprics, abbeys, &c., to erect a mint within their jurisdiction, they had neither the denomination, stamp, nor alloy which were always the prerogative of the crown, but only the profit of coinage. Yet it is remarkable that no coins of English barons are found; and it would appear that, if they really did coin money, they

* The coin here exhibited is supposed to have been struck on the agreement between Stephen and Henry. Though a silver penny, weighing 18½ grains, it sold at Mr. Dimsdale's sale for 13l. 2s. 6d.

Of Richard I. there are only French coins, of which Fig. 30 represents his Poitou penny. The immense ransom paid to redeem him from captivity may perhaps account, in some measure, for the rarity of his coins; or rather the immense coinage of Henry II. rendered a fresh issue of English money almost unnecessary till the middle of the reign of Henry III.

It is asserted by old historians that in the civil wars of Stephen, (fig. 28*) "Omnes potentes tam episcopi quam comites et barones suam faciebant monetam." (All the great men, as well the bishops as the earls and barons, coined their own money); and that as soon as Henry II. (fig. 29) found himself securely seated on the throne, he put an end to this usurpation of the baronage: since when, the

never put their names, and the pennies are not distinguishable from others. There are many coins of English bishops and St. Peter's pence, bearing STPETR on them. These pence originated from Offa, king of Mercia, engaging to pay the sovereign Pontiff a yearly donation for the support of an English college at Rome, and to raise the money, he imposed the tax of 1d. on each house possessed of 30d. This imposition, afterwards levied on all England, was denominated Peter's pence. There are also pennies of St. Martin (SCI. MARTI) struck at Lincoln, and of St. Edmund (SCEAD) at Bury, before the conquest. The king's seigniorage or royalty was anciently a part of the regal revenue. Of every pound weight of gold the king had commonly 5s. for his coinage, out of which he generally allowed 12d. and sometimes 18d. to the Master of the Mint for his work and trouble. In the reign of Henry V. the king's seigniorage of every pound weight of silver was 15d. The rights of seigniorage have been abolished since Charles II., and there was not anything taken either for the king or for the expenses of coining, it having been settled by Act of Parliament that all money should be struck at the public charge; but lately, to prevent the sovereigns being illegally melted down, a small seigniorage has been imposed on them.

Previous to the thirteenth century the silver penny may be regarded as the only and universal coin all over Europe. In Italy, France, Spain, and Portugal, a corruption of the old Roman name denarius prevailed, whence (Italian) *danaro*, money; (French) *denier*, money; (Spanish) *dinero*, money; (Portuguese) *dinheiro*, money; but in England it was called *pending*, from *pendo*, "to weigh," as supposed, and afterwards *penning* and *penny* (German, *pfennig*). It was originally of the same dimensions and weight as the later Roman denarius, but was soon made thinner, so as to be larger in size, though of the same weight; and it is now, in intrinsic value, not worth more than 3d. The first English pennies weighed 22½ grains troy; towards the end of the reign of Edward III., 18 grains; in that of Edward IV. about 12 grains; in Edward VI., 8 grains; and after the 43rd of Elizabeth, 7¾ grains. During the early period of the English coinage, no attempt appears to have been made to attain a likeness of the several monarchs on their coins; and though Henry VI. was only of the tender age of nine months when he began his reign, which continued thirty-eight years, his earlier and later money cannot be distinguished by his portrait.

The earliest variation from a bust on the obverse of the regal coins is the florin, and its divisions, of Edward III. The reverses of the Norman coins to the reign of Edward I. consist of the names of the moneyer and Mint, encircling crosses, with pellets, *fleurs de lys*, &c.; this favourite device of the cross, which was displayed in every possible form, occurs so late as the halfpenny of James I. The orb and cross appear on coins of Edward the Confessor, and the gold penny of Henry III. (Fig. 32.) After Edward III., this ancient symbol is often superseded by devices connected with heraldry, as the royal arms, crowns, badges, lions, &c., disposed with fancy rosettes, quatrefoils, and other borders. On the double sovereigns, and on some of the sovereigns and crowns of George III. and on those of George IV., St. George and the Dragon have been substituted for the coat of arms. Ruding says, that the earliest specimens of Mint marks are those of the Durham Mint of Edward I.; that they first appear on the regal coins of

Fig. 32.



[Gold Penny of Henry III.—20d.]

Edward III.: in the reign of Henry VI. they began to be varied, their number increasing very rapidly in Edward IV.; and they were not entirely disused till Charles II. Mint marks are usually very small and very diversified, consisting of birds' heads, castles, dragons, roses, &c.; and the same Mint mark was not always adopted by the same monarch. A catalogue of those of the different kings is given by Ruding, but it is much too long for our limits.

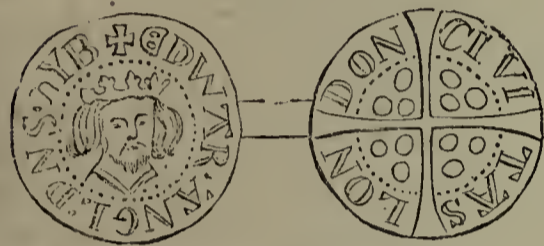
DNS. HYB. (Dominus or Lord of Ireland) first appears on the coins of Edward I.* as does *Dei gratia* and Dux Aqvt. (Duke of Aquitaine) under the three Edwards. The coins of Edward I., II., and III. are very similar to each other. Archbishop Sharp first distinguished them thus:

Fig. 33.



[Silver Penny of Edward I.]

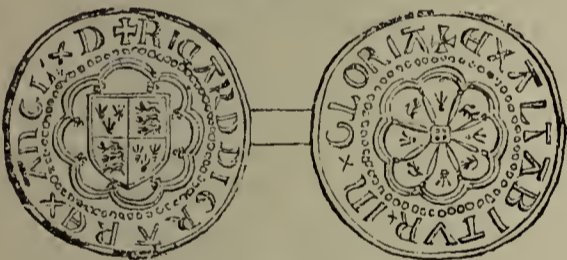
Fig. 34.



[Silver Penny of Edward II.]

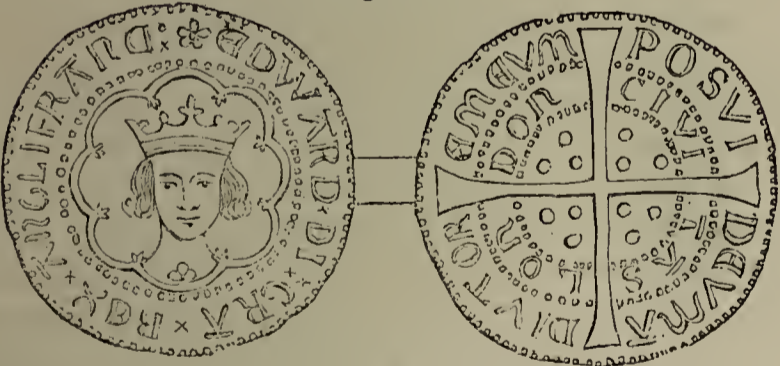
King of France, which was finally abandoned by George III. *Fideli defensor*, a title first adopted by Henry VIII., is ascribed on coins to Charles I. The St. George and Dragon is borne on some of the coins of Henry VIII., and the harp for Ireland on his Irish money; the use of HYB. REX also commenced in this reign. The harp was first quartered with the royal arms in that of James I.

Fig. 37.



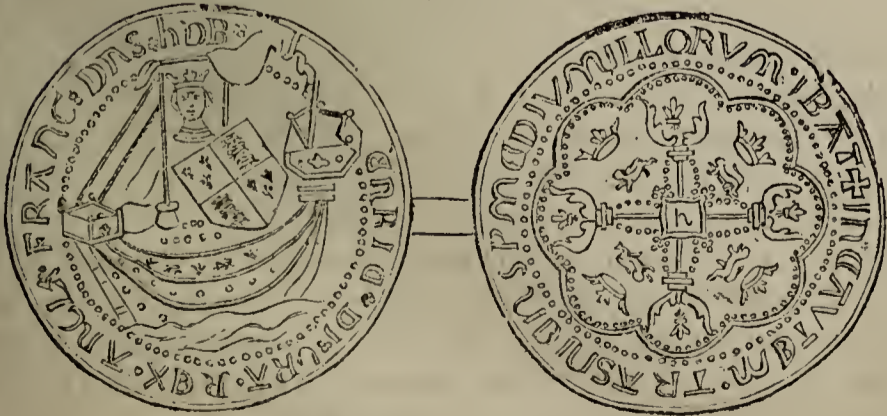
[Gold Halfpenny of Richard II.]

Fig. 38.



[Groat of Henry IV.—Silver.]

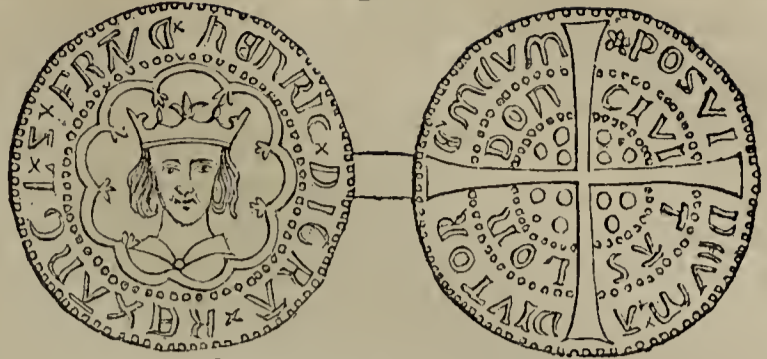
Fig. 39.



[Noble of Henry V.—Gold, 10s.]

* IOHES DNS had before appeared upon the Irish pennies of John,

Fig. 42.



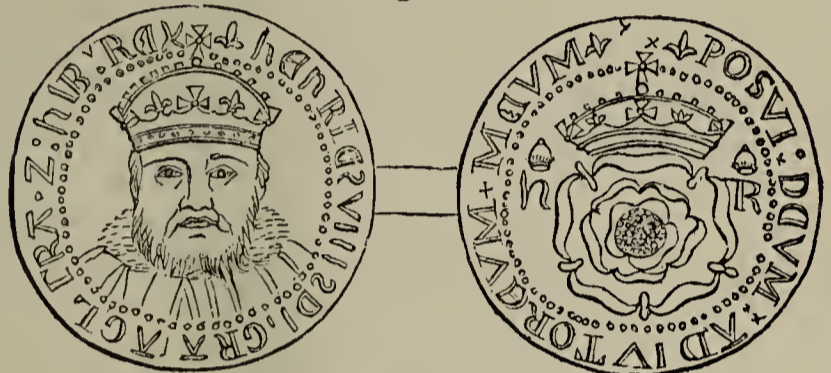
[Groat of Edward IV.—Silver.]

Fig. 43.



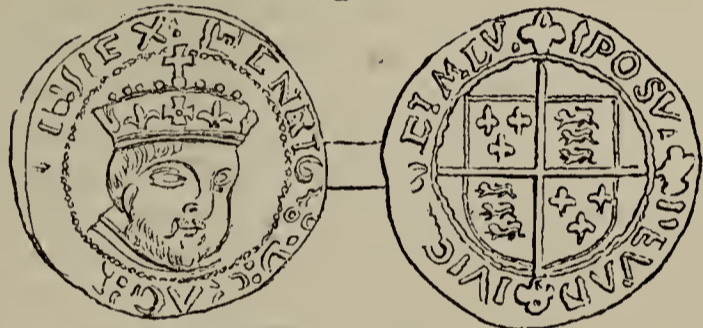
[Groat of Richard III.—Silver.]

Fig. 45.



[Broadfaced Shilling of Henry VIII.—Silver.]

Fig. 46.



[Base Coin of Henry VIII.]
[To be continued.]

INTELLECTUAL PROGRESS OF THE CHINESE.

WE have received from Canton the 'First Report of the Society for the Diffusion of Useful Knowledge in China,' accompanied by an interesting private letter from one of the members. The very idea of an institution whose object is, "by all means in its power, to prepare and publish, in a cheap form, plain and easy treatises in the Chinese language, on such branches of useful knowledge as are suited to the existing state and condition of the Chinese empire," may perhaps appear ridiculous to those who take a superficial view of the character of the people. But we have the testimony of individuals who have been long resident in China, to the fact that in spite of the obstinacy of the governors and local authorities in opposing any intercourse with foreigners, excepting under the narrowest regulations possible, the feeling among the people on this subject is of a far less bigoted character. During Lord Amherst's voyage, the elders of a village, who were anxious to make friends of the English, speaking of the mandarins who are the great enforcers of restrictions, said:—"Our mandarins are rogues, but the people are your friends." The address in which they expressed their amicable feelings towards his Lordship and the English, contained the following passages:—"We, the inhabitants of this village, have never before seen you foreigners*. All people crowd on board your ship to behold you, and a tablet is hung up therein, stating that there is a physician for the

* Foreigners are generally called barbarians.

assistance of mankind. There are also tracts against gambling, and other writings, besides a treatise on your country, with odes and books; all which manifest your friendly, kind, and virtuous hearts. This is highly praiseworthy." * * * Lying and gambling are the most common vices of the Chinese, and tracts on each of these subjects were distributed both by the expedition under Lord Amherst, and by Mr. Gutzlaff, a missionary, who has published a 'Journal of Three Voyages along the Coast of Cochin China in 1831-2-3.' The work on 'England' alluded to, was written by Mr. Majoribanks, and translated into Chinese. It is in every respect a clear and excellent little work, addressed not merely to the formal mandarin, but to the more popular sense of the majority of Chinese. The effect which it has had in promoting a friendly intercourse is acknowledged to have been beyond expectation. Mr. Gutzlaff, who also distributed copies, says that it was everywhere demanded.

Perhaps the reader may feel inclined to remark that where the people are unable to read, it is of little use distributing books among them; but it is altogether an error to suppose that they are destitute of this accomplishment, and indeed it is very common as well among the poor as the rich. In a junk in which Mr. Gutzlaff was once a passenger, the sailors, though in a state of extreme poverty "could read, and took pleasure in perusing such books as they possessed."

This favourable state of things is not sufficiently known in England, and is altogether opposed to the popular prejudices and notions which are generally entertained concerning the Chinese character. China is probably destined at some future day to become a vast mart for the productions of English industry; and any efforts calculated to render the favourable symptoms already evinced generally manifest among the masses in China, will materially hasten this new era in our commercial intercourse with the east. A vaster field for the exertions of men who love their fellow-creatures nowhere presents itself than in China; the population comprises one-third of the whole human race, and the results of a moral revolution in their habits and modes of thinking would be of the grandest and most striking character. Under the present circumstances of this great empire, and considering the advantageous change which has thrown it more into the path of English enterprise, we regard the Society at Canton as a most seasonable and useful institution, and deserving of extensive support. We invite attention to the fifth of the Society's rules:—"Individuals not resident in China, who, from their knowledge of the language, may be supposed able and willing to forward the objects of the Society by original works or translations, may be elected *corresponding* members. And any individuals unacquainted with the Chinese language, who may be willing to aid the Society by their influence or otherwise, may be elected *honorary* members." Individuals friendly to the objects of the Society are also invited to form auxiliary associations in aid of its funds.

The Report commences with the following allusion to the field which the Society has chosen for its operations, and the spirit in which it commences its labours:—"When great enterprises are to be undertaken in unexplored fields, the first efforts are usually compassed with many difficulties and often opposed by great obstacles. Perhaps no association was ever formed under circumstances more peculiar than those of this Society. Free, pacific, and benevolent in its design, it recognises no authority, either to protect or sustain it, except those of reason and truth. The rights which it claims are simply those of putting within the reach of a great nation the richest treasures of knowledge which can be gathered from the records of past and present times.

The field which invites, by its multiplied necessities, the labours of this Society, contemplates the welfare of a third part of our species, who are scattered over a vast extent of territory, stretching from the Russian frontiers on the north to the equator on the south; and from the Pacific ocean on the east to the mountains of central Asia on the west. Many thousands of Chinese, and others who speak their language, are already accessible; and unless the spirit of the age and the march of improvement be checked, every year we may expect will bring them more into contact with the people of the west."

The Society is scarcely yet organized. It consisted, in October last, of forty-seven members, viz., eight honorary, ten corresponding, and twenty-nine resident members. It is justly remarked that "the very existence of this Society is evidence of recognised obligation resting on the Christian community resident in this country, that, possessing themselves the rich fruits of knowledge, they are bound to communicate them to others. * * * We must go on and meet opposition; nor give up the contest, a contest of truth with error, till the millions of this empire shall participate in all the blessings of knowledge which we now so richly enjoy."

The difficulties which the infant institution has to overcome can scarcely be conceived. As much of the information which it is proposed to communicate to the Chinese will be perfectly new to them, it is necessary to construct a nomenclature for terms in geography, history, science, accounts of engines, machines, and implements of industry; and the type to be used is not of course quite so easily to be obtained as a set of English types. Notwithstanding the magnitude and variety of obstacles, the Report informs us that already "three works are being prepared for the press: 1st, a General History of the World; 2nd, a Universal Geography; and 3rd, a Map of the World. These (it is stated) have been several months in hand, and will be carried forward and completed with all convenient dispatch. They are designed to be introductory works, presenting the great outlines of what will remain to be filled up. The history will be comprised in three volumes; the geography in one. The map is on a large scale—about eight feet by four, presenting at one view all the kingdoms and nations of the earth. The committee expect these three works will be published in the course of the ensuing year (1836); and it is hoped they will soon be followed by others, in which the separate nations, England, France, America, &c., their history and present state, shall be fully described."

As it would be absurd needlessly to excite the jealousy of the Chinese authorities, the Society purposes establishing its printing-press in one of the British settlements in the Straits of Malacca. The private letter which we have received along with the Report, shows the expediency of this arrangement. This letter is dated December 30th; and says:—"Some difficulty has been experienced in getting printers and pressmen at Macao, on account of the jealousy of the Chinese government, who have denounced as traitors all who assist the "barbarians" either in printing or disseminating their books. The consequence of this has been that the work has hitherto been done covertly, and by stealth, under the immediate protection of the superintendent in his own house. At times no work whatever can be done, through fear of the Chinese authorities, either at Canton or Macao. We shall, however, remedy this very shortly by setting up a press on board one of the stationary receiving-ships at Lintin, about twelve miles from Macao, where the printers will be out of all danger of molestation, fines, or bamboozing."

We learn from this letter that "the Americans, to their praise be it spoken (says the writer), have not only taken the lead in this good cause, but have hitherto

had, what the English have never had, a missionary at their own sole expense, whose week-day labours are employed in teaching Chinese children the English language gratuitously. They have just sent two others from the episcopal establishment for the same object: they are now studying the language at Singapore."

The intercourse with the eastern and northern coasts of China is fast extending, and they are now regularly visited by the opium ships several times every year. Through this medium the Society will be enabled to distribute a number of its treatises.

ON THE TROGONS.

THE trogons constitute a family of birds, the members of which are peculiar to the hotter regions of America, and of India, and its adjacent islands, Ceylon, Java, Sumatra, &c., one species only having as yet been discovered in Africa. Among the most conspicuous of the feathered tribes for beauty and brilliancy of plumage, the trogons stand confessedly pre-eminent. The metallic golden green of some species is of dazzling effulgence; in others less gorgeous: the delicate pencillings of the plumage, and the contrasted hues of deep scarlet, black, green and brown, produce a rich and beautiful effect. Nor is their shape and contour unworthy of their dress; were they far less elegantly arrayed they would still be pleasing birds.

It is difficult to convey the idea of a bird, or indeed of any natural object, by description solely; the annexed cut, however, will render the details connected with the family features of the present group easily intelligible.

The trogons are *zygodactyle*, that is, they have their toes in pairs, two before and two behind, like parrots and woodpeckers; the *tarsi* are short and feeble, the beak is stout, and the gape wide; the general contour of the body is full and round, and the head large; the plumage is dense, soft, and deep; the wings are short but pointed, the quill-feathers being rigid; the tail is long, ample, and graduated, its outer feathers decreasing in length; in some species, and especially in that brilliant bird the resplendent trogon (*trogon resplendens*, Gould), the tail-coverts are greatly elongated, so as to form a beautiful pendent plumage of loose wavy feathers.

Of solitary habits, the trogons (or *corouci*) frequent the most secluded portions of dense forests, remote from the abodes of man. For hours together they sit motionless on some branch, uttering occasionally a plaintive melancholy cry, especially while the female is brooding on her eggs. Indifferent during the day to every object, listless or slumbering on their perch, they take no notice of the presence of an intruder, and may indeed be often so closely approached as to be knocked down by a stick; the bright glare of the sun obscures their sight, and they wait for evening, the dusk of twilight being their season of activity.

Fruits, insects and their larvæ, constitute their food. Formed, most of them at least, for rapid but not protracted flight, they watch from their perch the insects flitting by, and dart after them with surprising velocity, returning after their short chase to the same point of observation. Some, however, are almost exclusively frugivorous, we allude more especially to those whose flowing plumes impede the freedom of their flight; such seek for fruits and berries. Many species are certainly migratory. M. Natterer observes, respecting the pavonine trogon (*trogon pavoninus*, Spix), which inhabits, during a certain season of the year, the high woods along the upper part of the Amazon and Rio Negro, that he found the contents of its stomach to consist principally of the fruit of a certain species of palm, and that it arrives in those districts when its favourite food is ripe, but that when the trees no longer yield an adequate supply it retires to other districts.

Like the parrots and woodpeckers, the trogons breed

in the hollows of decayed trees, the eggs being deposited on a bed of wood-dust, the work of insects; they are three or four in number, and white. The young, when first hatched, are totally destitute of feathers, which do not begin to make their appearance for two or three days; and their head and beak appear to be disproportionately large. They are said to rear two broods in the year.

Azara, speaking of the *Surneua trogon*, a native of Paraguay and the Brazils, informs us that it is seen only in the largest woods, and that it "generally remains on the upper portions of the trees, without descending to the lower branches or to the earth; it sits a long time motionless, watching for insects which may pass within its reach, and which it seizes with adroitness; it is not gregarious, but dwells either in solitude or in pairs; its flight, which is rapid and performed in vertical undulations, is not prolonged. These birds are so tame as to admit of a near approach; I have seen them killed with a stick. They do not migrate, and are never heard except in the breeding season; their note then consists of the frequent repetition of the syllables *pee-o*, in a strong, sonorous and melancholy voice; the male and female answer each other. They form their nest on the trees, by digging into the lower part of the nest of a species of ant, known by the name of *cupiy*, until they have made a cavity sufficiently large, in which the female deposits her eggs, of a white colour, and two, or as some assert, four in number. I have seen the male clinging to a tree after the manner of woodpeckers, occupied in digging a nest with his beak, while the female remained tranquil on a neighbouring tree."

The American trogons have their beak of moderate size, with serrated (or saw-like) edges, and furnished at its base with bristles; the upper surface (of the males at least) is of a rich metallic green, the under parts being more or less universally scarlet or rich yellow. The outer tail-feathers in the majority of the species are more or less barred with black and white.

In the Indian trogons the beak is larger and stouter, with smooth edges, having a tooth near the tip of the upper mandible. The eyes are encircled by a large bare space of richly-coloured skin; the upper surface is brown, the lower more or less scarlet, and the outer tail-feathers exhibit no tendency towards a barred style of marking, excepting in one species, Diard's trogon, in which the three outer tail-feathers are finely powdered with black.

The African species (*trogon narina*, Levaill.) closely approximates to its American relatives; but its three outer tail-feathers are unbarred. This species inhabits the dense forests of Caffraria; during the day it sits motionless on a low dead branch, and it is only in the morning and evening that it displays activity. Locusts and other insects are its principal food.

Of all the trogons none are so magnificent as the *trogon resplendens*, lately introduced to the knowledge of the scientific world, as a distinct species by Mr. Gould, and admirably figured in his splendid 'Monograph' of the family *trogonida*. This bird, as stated by Mr. Gould, "is to be found only in the dense and gloomy forests of the Southern States of Mexico." Little known to Europeans, except within the last few years, the brilliant plumes which fall over the tail (and which, as is the whole of the upper surface of the body of this bird, are of the richest metallic golden green) were made use of by the ancient Mexicans, as ornaments on their head-dresses; and gorgeous must a head-dress be, composed of such feathers—soft, flowing, of dazzling lustre, and three feet in length. In later times they have occasionally been transmitted as curiosities to Europe. Mr. Gould observes that M. Temminck is the first who figured the present species; but that celebrated naturalist confounded it with the *trogon pavoninus* of Dr. Spix, a Brazilian species to which it is nearly allied,

but from which it differs in having a soft silky crest, of long full feathers, and the plumes of the tail-coverts extremely long, whereas in the pavonine trogon there is no crest, and the tail-coverts do not extend above an inch or two at most beyond the tail.

Of the New World trogons, those of Mexico possess in the length of the tail (at least in many instances) a feature distinguishing them from all their congeners; as an example in point we may refer to the *trogon elegans* (Gould), a new species, received by the author of the 'Monograph,' together with the *trogon resplendens* from Guatemala, a country rich in zoological stores, and constantly affording new treasures for the contemplation and study of the naturalist.

No group of birds offers a clearer proof than the *trogonidæ*, of the rapid advancement of ornithological knowledge, and of the great researches which have been made in this department of natural history. In the time of Linnæus, who enumerates only three species, the existence of these birds in India and Africa was not known. Levaillant added the *Narina*; and of late years, Vieillot, Spix, Temminck, and Swainson, have each contributed to enlarge the catalogue. The most important labours on the subject, however, are those embodied in Mr. Gould's 'Monograph,' in which he has established seven or eight species, hitherto unknown; the description being accompanied with admirable figures. Our group is copied from figures in Mr. Gould's work.



[Trogons.]

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THE FOX AND THE CROW.



[Fox and Crow.]

THE above engraving illustrates a well-known fable, the moral of which is embodied in various apothegms and proverbs. The general reader will also easily recollect numerous essays and tales in prose and verse, which have for their object the working out and exemplifying the lesson taught by the fable. Shakspeare has devoted a play to the subject—*Timon of Athens*—of which Dr. Johnson remarks, “The catastrophe affords a very powerful warning against that ostentatious liberality which scatters bounty, but confers no benefits, and buys flattery, but not friendship.”

Perhaps it may be objected to the fable that the personation of the subtle power of flattery is too broad and coarse, and that the simple vanity which is ridiculed approaches to stupidity. But we must recollect that flattery only becomes refined and subtle with the refinement of manners and the spread of intelligence. The common style of adulation in use, when England was in the transition state from feudalism to constitutional liberty, was so gross and fulsome that we can hardly read it without doubting whether or not it was possible for one human being to use such language to another. Cardinal Wolsey, in his day of pomp and place, relished compliments which could not now be accepted without supposing a deficiency of understanding. Every reader of history is familiar with the fact that the masculine mind of Elizabeth was

throughout her entire life enslaved to a system of flattery of the most ridiculous and grossest description. And the style adopted on many occasions towards James I., makes us blush for the want of manliness in the courtly manners of the time.

The fable is a very old one, and is amongst the best of those which are attributed to Esop. It is simple, clear, and distinct, and tells its object with considerable effect. “It is the simple manner,” says Dodsley, “in which the morals of Esop are interwoven with his fables, that distinguishes him, and gives him the preference to all other mythologists. His *Mountain and the Mouse* produces the moral of his fable in ridicule of pompous pretenders; and his *crow*, when she drops her cheese, lets fall, as it were by accident, the strongest admonition against the power of flattery. There is no need of a separate sentence to explain it—no possibility of impressing it deeper by that load we too often see of accumulated reflections.” The following is Dodsley’s version of the fable:—

“A fox observing a raven [crow] perched on the branch of a tree, with a fine piece of cheese in her mouth, immediately began to consider how he might possess himself of so delicious a morsel. ‘Dear madam,’ said he, ‘I am extremely glad to have the pleasure of seeing you this morning; your beautiful shape and shining feathers are the delight of my eyes, and would you conde-

scend to favour me with a song, I doubt not but your voice is equal to the rest of your accomplishments.' Deluded with this flattering speech, the transported raven opened her mouth in order to give him a specimen of her pipe, when she dropped the cheese; which the fox snatching up bore away in triumph, leaving the raven to lament her credulous vanity at her leisure.'

MEDICAL EVIDENCE.

(Abridged from the fifth edition of Beck's 'Medical Jurisprudence.')

WHENEVER the importance of equal laws becomes fully recognised in a country, and the necessity of distributing impartial justice fully understood, it will soon suggest itself to the legislator that in many lawsuits, exclusively of the witnesses who are to testify to certain facts, others are wanted to give their opinion as to the import or bearing of those facts. Thus, when the suit has originated in mercantile disputes, the opinions of merchants have guided the decisions of judges, and their usages have become a part of the law of various countries. So, too, when unexpected death has followed known or supposed violence, it was natural that those who were best qualified by their ordinary studies should be called upon to clear up the difficulties of the case. It is now three centuries since this principle was recognised by a formal enactment in an European code. In 1532 the Emperor Charles V. ordained that the opinion of medical men should be taken in every case where death had been occasioned by violent means; such as child-murder, poisoning, wounds, hanging, drowning, and the like: and in other countries either law or custom has long sanctioned this appeal to medical testimony.

The medical witness, when summoned, should satisfy himself as to the cause of death. He should proceed to a dissection, if he entertains the slightest doubt; and he has the right to demand this, or, as an alternative, to refuse to give evidence.

The duties required of him cannot be satisfactorily or conscientiously discharged without competent knowledge. An acquaintance with anatomy is indispensably necessary, and peculiarly so in those interesting cases where he has to distinguish the effects of disease or violence from ordinary appearances. Unless he is well grounded in that science, the phenomena that follow natural death may be mistaken for the effects of poison, or the consequences of severe injury. Anatomy, then, both physiological and pathological, must be applied to the case. Nor is this always sufficient. If the question of poisoning be agitated, chemistry is required to lend its aid; and if it be a case involving the presence of pregnancy, or the occurrence of delivery, the knowledge of the accoucheur will be necessary.

Now the just application of all this must not be evaded. The members of the profession in every part of the country are liable to be summoned, and that on the shortest notice, to take a part in such an investigation. Are they all qualified to do justice to it? Am I doing them wrong in saying that they are not? Medical men are constantly engaged in a most laborious and engrossing occupation; and after obtaining their education, their opportunities for pursuing practical anatomy are extremely narrow. The accessory sciences also are only cultivated by a few. Does it not then appear that a duty is required which in many cases cannot be properly discharged? These reflections naturally lead to a proposition which has been sanctioned by the experience of several continental countries, and has certainly led to the distribution of equal justice. It has done more; for in the opinion of competent judges, it has led to the diminution of crimes, evidently from a certainty of their detection. We mean the appointment of medical men in a county or district,

who shall be specially charged with these medical investigations.

The germ of such a regulation appears in the code of Charles V.; and it has for centuries been the practice in Austria to appoint individuals to superintend these examinations and to report on them. In 1606, Henry IV. of France gave letters patent to his first physician, by which he conferred on him the power of appointing two surgeons in every city or important town, to whom alone it should belong to examine all wounded or murdered persons, and to report upon them. It was soon discovered that in many instances the investigation would be incomplete unless physicians were associated with them; and accordingly, in 1692, this was ordained by the council of state.

In Prussia the district physician is directed to bestow his especial attention on the salubrity of the district committed to his charge. When contagious or epidemic disorders appear, he is to adopt the speediest measures that prudence suggests, and to apprise the boards whom such events chiefly concern. Upon all occasions, when called upon, he is to be ready to engage in the *post-mortem* examinations which devolve upon him, and in the medico-legal investigations relative to injuries to living persons, and concerning the state of mind and body of individuals submitted to his scrutiny, giving a deliberate judgment in each case. He is also to devote particular regard to the progress of vaccination. A practical school of legal medicine has arisen from these regulations. It is attached to the University of Berlin, and was opened in the summer session of 1833. Each student is admitted in his turn to look into the cases of living subjects, to perform judicial *post-mortem* examinations, and to analyse inorganic and inanimate substances; after which, he is required to make a report on what has been submitted to him, in the same style as the district physician does. The students are exercised in the proper mode of examining both adult and infantile corpses—and every physician is aware how much practice and skill are requisite to appreciate the tests derived from the lungs of the latter. Every six months a course is delivered on the modes of testing the presence of poisons, both mineral and vegetable, and these modes the students practise.

The advantage of designating individuals for the particular duty of medico-legal examination would seem to be striking and prominent. It would lead to more accurate study of the science, and afford numerous opportunities of improving it. It would in a great degree prevent those disputes about facts which produce so many unpleasant collisions in courts of justice; and above all, it would spare many the performance of a disagreeable duty liable to curtail the extent of their practice, or impair its usefulness.

FEATS OF SWIMMING AND DIVING.

OF all other people, the English ought to be among the most expert swimmers, from the great extent of their coasts, their number of rivers and canals, their nautical character, and, above all, because their population being so much crowded in large towns, bathing is absolutely necessary to their health. There are, however, few nations that do not excel us in this art. Even inland capitals, such as Berlin, Moscow, and Berne, have their schools where swimming is taught. The ancients were particularly attentive to the practice, and it appears that a man unable to swim was considered by the Roman law as low bred and uneducated. Whole tribes of barbarous nations of antiquity were able to swim over rivers, straits, and lakes. But swimming is not only of itself useful, it is of great collateral advan-

tage in giving vigour and form to the limbs, and to the general system; and it is probable that the ample exercise which the muscles and lungs obtained in the frequent bathings of the ancients, gave their chests that round, full form which is so observable in their statues. Hence all flat and narrow-chested children, of consumptive tendency, ought to be taught to swim.

The human form is better adapted to swimming than any animal not absolutely aquatic. Savages, and the inhabitants of very warm latitudes, will even excel the greater part of amphibious animals in the water; fighting with the shark, diving with the crocodile, and continuing under water an almost incredible length of time in search of pearls, coral, and other profitable commodities, as well as for amusement and recreation. The pearl oyster-fishers in Ceylon are accustomed to dive from their infancy, and fearlessly descend to the bottom in from four to ten fathoms water. The exertion often undergone during this process is so violent, that upon being placed in the boat after, they discharge water from their mouth, ears, and nostrils, and frequently even blood. But this does not prevent them from going down in their turn. They will often make from forty to fifty plunges in one day, and at each plunge bring up about one hundred oysters. Some rub their bodies over with oil, and stuff their ears and noses, to prevent the water from entering; while others use no preparation whatever. The usual time of remaining under water does not exceed two minutes, yet there are instances asserted of divers who could remain even four and five minutes, though this has been denied by some recent writers.

In 1801, when H.M.S. Canada was commanded by Sir Joseph Yorke, there was a black man on board, who used to perform some extraordinary feats in the water, by far surpassing all the crew, which consisted of 600 able-bodied seamen. But this negro, whose name was Johnson, was as much excelled by one of the quarter-masters of the name of Hall, as the black excelled the rest of the Canada's crew. His principal feat was to drop from the main yard arm—a height about double that of Westminster Bridge—descend on one side, dive under the ship's bottom, a depth of thirty feet, and ascend to the surface on the other. When Hall was in his prime, he had been induced by a large wager to perform this feat, with the difference of throwing himself from the topsail yard arm instead of the main yard. He fell from this tremendous height, dived down the larboard side, and the crew stood in breathless suspense for his fate. Every eye was fixed to see him ascend on the opposite side; the length of time, however, which he remained under water, seemed to destroy all hope, when he at last arose above the water, apparently much distressed, struggled a few seconds, and sunk. All now was sorrow amongst the crew, and those who had made the bet reproached themselves that they had stimulated the brave man to attempt an impossibility to the destruction of his own life. Nothing was heard fore and aft the decks but praises of "Poor Tom Hall," and sorrow that he should have "met his death in such a way." In about a quarter of an hour from his last appearance, a violent burst of laughter was heard, as if proceeding from out of the sea. Every head was thrust over the side and through the ports, to ascertain what it could be; when to the no less astonishment than delight of every soul on board, Tom Hall was seen frolicking and sporting in the water, and laughing and jeering at the crew. When he appeared above water after the first plunge, he had kept his head above the surface sufficiently long to regain his wind, on which he dived back again to the side where nobody was looking for him, and having swam to the stern, he supported himself by the rudder chains, under the counter, till

the idea of his death was confirmed by the length of his absence, when he swam to the side, and hailing the ship, enjoyed the surprise which his re-appearance occasioned. Several feats of modern swimming have, within a few years past, occurred, in which considerable prowess has been evinced. Lord Byron and a Mr. Ekenhead swam across the Hellespont*. The same feat was accomplished by a Neapolitan and a young Jew. Lord Byron's object was to ascertain whether the Hellespont could be crossed at all by swimming. Lord Byron succeeded in an hour and ten minutes; Mr. Ekenhead in one hour and five minutes, with the tide not in their favour. In a letter to Mr. Murray from Ravenna, dated February 21, 1821, Lord Byron on this subject writes—"My own experience, and that of others, bids me pronounce the passage of Leander perfectly practicable. Any young man in good health, and with tolerable skill in swimming, might succeed in it from either side. 'I was three hours in swimming across the Tagus, which is much more hazardous, being two hours longer than the passage of the Hellespont. Of what may be done in swimming, I shall mention one more instance. In 1818 the Chevalier Mengaldo (a gentleman of Bassano), a good swimmer, wished to swim with my friend Mr. Alexander Scott and myself. As he seemed particularly anxious on the subject, we indulged him. We all three started from the island of the Lido, and swam to Venice. At the entrance of the Grand Canal, Scott and I were a good way a-head, and we saw no more of our foreign friend, which, however, was of no consequence, as there was a gondola to hold his clothes and pick him up. Scott swam on till past the Rialto, where he got out, less from fatigue than from chill, having been four hours in the water, without rest or stay, except what is to be obtained by floating on one's back—this being the condition of our performance. I continued my course on to Santa Chiara, comprising the whole of the Grand Canal (besides the distance from Lido), and got out where the Laguna opens to Fusina. I had been in the water, by my watch, without help or rest, and never touching ground or boat, four hours and twenty minutes." His Lordship further adds, "I crossed the Hellespont in one hour and ten minutes only. I am now ten years older in time, and twenty in constitution, than I was when I passed the Dardanelles, and yet two years ago I was capable of swimming four hours and twenty minutes; and I am sure that I could have continued two hours longer, though I had on a pair of trowsers, an accoutrement which by no means assists the performance."

Another feat is recorded of a Dr. Bedale, who for a wager swam between Liverpool and Runcorn (July 10, 1827), a distance of twenty-four miles, which he accomplished at the rate of six miles per hour.

A case was published in a provincial paper (September 19, 1820), of a sailor who was washed overboard from a French sloop at nine o'clock in the evening, and who swam all the night, and was picked up in the morning by a boat belonging to the Hero, of Liverpool. We can readily believe that a person may sustain himself in the sea, in warm latitudes, for half a day or more, as the water is often at least twenty degrees warmer than that of our rivers. Besides this, the water of the ocean is much more buoyant than river water.

Mr. Scrope, Fellow of King's College, Cambridge, some years ago received forfeit of 750 guineas, on a bet of 5000 guineas that he would swim from Englehurst, the seat of Lord Cavan, on the Southampton river, to the Isle of Wight. We are at present not aware of the precise distance. But one of the most extraordinary instances of the power of remaining immersed in water

* The Dardanelles, the strait which divides Turkey in Europe from Turkey in Asia.

is that recorded by Humboldt of the swimming couriers of Peru, as already related in the Supplement (No. 117) of the 'Penny Magazine' for January, 1834.

Combats in the water with aquatic animals necessarily imply skilful swimming in the human combatant. A few instances of such contests may therefore with great propriety be here introduced. The first is from the hands of Mungo Park. When that lamented traveller was swimming across the Niger with his negro servant, a huge crocodile suddenly arose and caught hold of the thigh of the latter. He would doubtless have crushed and torn it off with his immense jaws, but the negro was as good a swimmer and diver as the crocodile; and, turning rapidly round, he dashed his thumbs into the animal's eyes and tore them out. The crocodile immediately relinquished his hold, and retreated with a terrific roar. Mungo Park, having been brought up to surgery, dressed his servant's wounds, and saved his life.

Encounters with sharks in the water are numerous and well authenticated. The sea-lawyer, as this omnivorous fish is usually called among sailors, has invariably, in these engagements, come off second best. Among other extraordinary instances of swimming and remaining for a length of time immersed in the water, the following is recorded:—"In September, 1821, (says Mr. Clias, author of the 'Elementary Course of Gymnastic Exercises,') an English officer of the name of Smith swam across the lake of Geneva from Morges to Amphion, a distance of seven miles and a half, and back without stopping." If, as seems very likely in a lake, Captain Smith had no stream in his favour, this is a more surprising feat than any we have hitherto recorded. If he swam "at the top of his speed," all the time, which was impossible, he could not have been less than twelve hours immersed; but the probability is, that he did not average one mile in the hour, and that fifteen or sixteen hours must have elapsed between his getting out and returning. The following instance of the power of remaining immersed in the sea is also given in Captain Clias's work, on the authority of Vancouver. "The Carabees, expert at everything, are particularly so in the art of swimming, as if they were born in the water and formed for it: they swim like fish; the women acquit themselves as well as the men. When a canoe overturns, which happens very frequently, because they carry too much sail, they lose absolutely nothing of their baggage, and their being drowned is a thing never heard of. On these occasions the children are seen swimming about their mothers like so many little fish, and their mothers are so dexterous as to support themselves in the water with their infants at the breast, while the men are employed in putting the boat to-rights, and baling out the water. In 1699 a small vessel, belonging to the monks of La Charité, was overset by a gust of wind, between St. Lucie and Martinique, and all who were in it perished with the exception of a Carabee, who, without being aided by a plank or other morsel of wood that might have assisted him, kept himself buoyant upon the water for the space of sixty hours, supporting hunger, thirst, and the violence of the tempest which caused the loss of the vessel; and at last landed at a small creek, and communicated the news of the wreck which had happened."

The Viscount de Courtivron exhibited some interesting experiments on the Seine at Paris a few years back. They were as follow:—He left the swimming school in a boat containing thirteen swimmers, and when he reached the Quay D'Orsay, M. Courtivron went into the water, dressed as an infantry soldier. At the distance of thirty fathoms from the boat, he raised himself out of the water, and fired a musket containing four charges, the report of which was very loud. At

this signal an old soldier, who was placed on the Pont Royal, jumped into the Seine, the height being sixty-four feet, and carried to M. Courtivron a tin box, containing despatches. After having read the contents, he swam to the boat to impart them to his comrades. Instantly sixty-four persons, who had come with the colonel in other boats, jumped into the water, and followed his movements, he directing them by the sound of a horn. The swimmers executed in the water horizontally the movements which are executed vertically on the land.

Dr. Franklin's instructions in learning to swim are, to turn and roll in all possible ways in the water—to stand or sit in the water—to swim with the legs tied—with the hands out of the water—to leap like a goat—and even to cut the toe-nails in the water. The doctor used to lie on his back in a river, with the string of a flying kite in his mouth, which used to draw him along like a sail. He also made two painters' pallets, which, fixed on his thumb, he used as paddles to propel him forward. He does not object to the use of corks, provided, of course, that they are so fixed as not to slip from the shoulder to the waist, an accident by which so many have been drowned; and he advises the choice of clean water for the sake of the skin, though a much better reason, we apprehend, for the avoiding of dirty water, is the chance that a learner will gulp down no small quantity before he becomes a proficient. The professor of swimming in the Naval Academy at Naples (Signor Oronzio di Bernardi), makes his first lesson to consist in enabling the pupil to swim upright, to give him some idea of the natural buoyancy of the body, and to render the action of the limbs in swimming as similar as possible to their motion in our usual exercises. He tells us that in eleven days he taught a youth to swim nearly six miles in the Bay of Naples, his system being not one of rapidity, but of husbanding and recruiting the strength; but an ordinary swimmer ought to swim at least three miles an hour. Men have been frequently known to swim thirty miles a-day; and the famous Neapolitan diver, generally known by the name of Il Pesce, or the fish, on one occasion performed the distance of fifty miles in twenty-four hours, on the coast of Calabria.

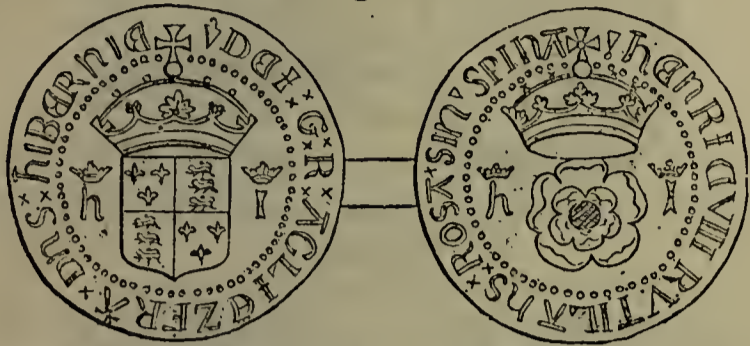
ENGLISH COINS.

[Continued from No. 276.]

Mottos appear to have commenced with Edward III., and the first seems to have been *Posui Deum adiutorem meum*, in allusion to the prosecution of his title to the throne of France, and this motto was continued by several of his successors. With Henry VIII. began *Rosa sine spina*, alluding to the circumstance, that Elizabeth of York having married the representative of the Tudors, the thorn was extracted. *Decus et Tutamen*, introduced by Charles II., still subsists on the edge of the double sovereigns and crowns. The next coins, in point of antiquity, to the silver penny, are the silver halfpence and farthings, first struck for a continuance by Edward I., though a few were issued in Ireland by John. They were found so inconvenient, from their minuteness, that no halfpence in silver have been struck since the Commonwealth, and the silver farthing ceased with Edward VI. The next coin in order of time is the groat, from the French word *gros*, a large piece which was introduced by Edward III. in 1354, and which continues to the present time, reduced in size, and not in common circulation. The half-groat, or twopenny piece, is of the same period and duration. The testoon, or shilling of Henry VII., struck in 1503, was so called from the *teste*, *tête*, or head of the king, which it bore. The testoon, being very much debased by Henry VIII., was afterwards current for sixpence, whence the word

tester, which is sometimes vulgarly applied to a sixpence. The name of shilling was taken from the German *schelling*, coins so denominated having been struck at Hanover in 1407. Before this time the crown had always been of gold (Fig. 47)—whence the old phrase

Fig. 47.



[Crown of Henry VIII.—Gold, 5s.]

“crowns of gold;”—and it was so named from the crown stamped upon it. There are Irish silver coins of Henry VIII. which bear on them H.A. for Henry and Anne; H. J. (Fig. 47) for Henry and Jane; and H. K. for Henry and Katherine. Some of his groats have on the reverse CIVITAS EBORACI, with a cardinal's hat under the royal arms, and the letters T. W. for Thomas Wolsey. This afterwards formed part of the charge against Wolsey, though it appears that the placing the initials of episcopal persons on the reverses of the smaller silver coins had been by no means uncommon. The broad shilling of Edward VI. (Fig. 48)

Fig. 48.



[Shilling of Edward VI.—Silver.]

was used in the time of Shakspeare at the play of shovelboard. Slender (Merry Wives of Windsor) complains that Pistol has robbed him of “two Edward shovelboards.” This shilling is called Throckmorton's, from a Master of the Mint of that name, and it is distinguished by the mint mark of a ton; others have a Y for Mint mark. The base money of this prince is the first bearing a date, and coins have been almost always dated since his reign. The coins of Philip and Mary, which were probably struck from treasure

Fig. 49.



[Groat of Mary.—Silver.]

Fig. 50.



[Shilling of Philip and Mary.—Silver.]

brought here by that king, are remarkable for bearing their portraits (Fig. 50), except in one instance, facing

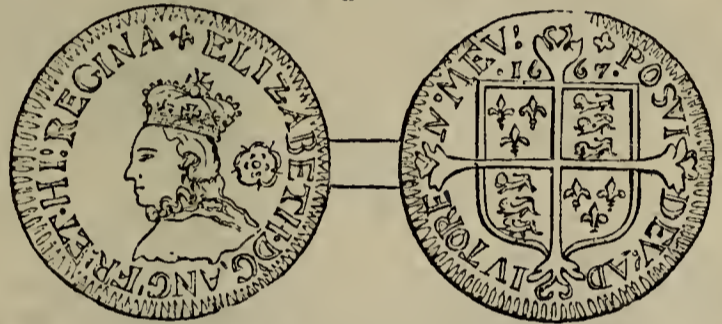
each other, which circumstance called forth this distich in Hudibras:—

“ Still am'rous, and fond and billing,
Like Philip and Mary on a shilling.”

In the coinage of Elizabeth, of 1561, when pieces of three-halfpence and three-farthings were first struck, the pieces from the shilling to the three-farthings were alternately with and without the distinction of roses and dates; and this was of singular use in the lesser pieces especially, otherwise they would have been in great danger of being perpetually mistaken one for another. Shakspeare, in King John, has a remarkable allusion to the type of the three-farthing piece, which was no doubt current in his time, though he puts the words in the mouth of a person who lived long before such pieces were coined. He introduces the bastard of Faulconbridge exposing the slight shape and thin countenance of his legitimate elder brother, and who, having just before compared him to a half-faced groat, at last assimilates him to a yet more contemptible piece of money, saying of himself that he would not at any rate have such a person,—

“ My face so thin,
That in mine ear I durst not stick a rose,
Lest men should say, ‘ Look where three-farthings goes ! ’ ”

Fig. 51.



[Sixpence of Elizabeth.—Silver.]

Fig. 52.



[Spur Ryal of Elizabeth.—Gold, 15s.]

There is also a passage in the Scornful Lady of Beaumont and Fletcher, that not only shows the difference between the penny and three-farthing piece, but also informs us of a knavish trick then commonly practised to impose the lesser of these coins upon heedless persons for the next in value. “ He had a bastard, his own toward issue, whipt, and then cropt, for washing out the roses in three farthings to make them pence.”

The three-farthing pieces and those of three-halfpence were discontinued in 1582. Groats are sometimes met with on which counterfeit roses have been attempted, probably to make them pass for sixpences. Queen Elizabeth regulated the coin, which had been much debased by her predecessors; and since 1601, the denominations, weight, and fineness of English silver have continued the same.

A considerable portion of the money coined in the reign of James I. was of the silver refined from the lead of the Welsh mines, and the crown, the half-crown, and shilling were distinguished by the Welsh plume placed over the royal arms on the reverse.

The siege piece of Charles I., called the Newark

shilling (Fig. 55), is remarkable for its deviation in
Fig. 55.



[Newark Shilling and Siege Piece of Charles I.—Silver.]

shape from the ordinary coin. Another siege-piece of Pomfret is octagon, and some other siege-pieces of this monarch are irregular portions of metal stamped with their weight, and cut from salvers, or any other plate that could be obtained. One half-crown known to the collectors is called the blacksmith's half-crown.

Fig. 54.



[Spur Ryal of Charles I.—Gold, 15s.]

Fig. 57.



[Shilling of Oliver Cromwell.—Silver.]

Fig. 58.



[Twopence of Charles II.—Silver.]

Fig. 59.



[Half-crown of James II.—Silver.]

Fig. 60.



[Half-crown of William and Mary.—Silver.]

The heads of William and Mary (Fig. 60) are in profile on their coins, looking the same way, in the manner that writers on ancient medals term *capita jugata*.

Fig. 61.



[Sixpence of William III.—Silver.]

Fig. 62.



[Shilling of Anne.—Silver.]

Silver pennies were much used till the close of the reign of George I., but they are now not common, being principally coined to be given to poor persons on Maundy Thursday, each person receiving the same number of pennies as the years of the king's age. In the latter part of the last century Spanish dollars were circulated in this country for 4s. 6d., the head of the English king being stamped very small on the neck of the Spanish monarch, but they were soon withdrawn. In 1804 the Bank of England issued dollars marked 5s., which at first passed for that sum, but afterwards their current value increased to 5s. 6d.; and in 1811 silver tokens of 3s., and others of 18d. value, were published by the Bank, but these as well as the dollars were called in at the general recoinage in 1816.

Fig. 63.



[Shilling of George I.—Silver.]

Fig. 64.



[Penny of George II.—Silver.]

Fig. 65.



[Guinea of George III.—Gold, 21s.]

Fig. 66.



[Double Sovereign of George IV.—Gold, 40s.]

Fig. 67.



[Sovereign of William IV.—Gold, 20s.]

[To be continued.]

THE SKUNK, OR POLECAT OF NORTH AMERICA.

[From a Correspondent.]

THIS animal is found in almost every section of the hitherto explored regions of North America, but my own experience has led me to remark, that in mountainous and barren countries, where there are but few inhabitants, skunks are more numerous than they are in the fertile and thickly-settled districts. The skunk—for that is the name by which it is generally known—is much larger than our common polecat, or fourmart, for a full-grown one will weigh from six to nine pounds; and if we are to give credit to the accounts given by some of the north-west fur traders, sometimes considerably more. Its shape, however, does not resemble our marten, or polecat, or any of the weasel species, being much bulkier in proportion to its length. It is covered with fur of so coarse a texture that its skin is of little or no value. The back is of a dirty white, extending even to the extremity of its long, bushy tail; while the sides and belly are nearly black, or of a very dark brown. It is a shy and solitary animal, rarely venturing abroad by daylight, unless driven from its den under some loose rock, or the hollow portion of some old tree, by the urgent cravings of hunger. It is but seldom *seen* in those predatory excursions, but it requires no particular acuteness in the sense of smelling to ascertain when a skunk has been abroad. The effluvia, which it emits at pleasure, is more powerful and offensive than that of any other animal. It seems a strange compound, in which musk is one of the strongest ingredients. This nauseous scent is contained in a small bag, in a liquid state, and can be ejected at pleasure. When this creature is hunted or pursued, therefore, it seldom takes the trouble to turn upon its pursuer; but if unable to escape by flight, it stops, turns its head in order to see where its enemy is, and then squirts a portion of this diabolical fluid, and with wonderful precision, right in the face of the pursuer! Amongst all the dogs I ever had, there was but one I could prevail upon to hunt this offensive animal. I once had a fine young dog of the wolf-hound breed, that would have attacked a wolf, bear, or panther; but I have been amused to see the cautiousness with which he pursued a skunk, always taking especial care not to come too near it; and if the animal happened to halt, my brave Hector (for that was his name) would turn his tail in an instant, and be off to a very respectable distance. In order to give the reader a correct idea of the powerful nature of the effluvia of this animal, I give the following instance which happened to a friend's family living on the adjoining farm to mine:—

My friend's family had then been but a short period in America, and had had but little acquaintance with skunks. About the middle of the night my friend's wife awoke, and thought she perceived the night air most extraordinarily affected. After some time she fancied she experienced great difficulty in breathing, and thereupon becoming greatly alarmed awoke her husband, desiring him to open the windows without delay, and, if possible, ascertain what was the matter. He accordingly opened the windows to admit the fresh air, but instead of being relieved, they were both exceedingly alarmed on finding the "infernal vapours"

very much increased. Mrs. T. was so greatly alarmed that she insisted upon the whole family being assembled, since (to use her own language) she felt assured that the end of all things mortal was at hand. In an hour or two, however, matters became more endurable; and on the return of daylight one of the family was dispatched to their nearest neighbours, in order to ascertain if they had been alarmed in the night by the stench of sulphurous vapours. After some little explanation, the old Yankee informed the messenger, that about the time my friend's family had first become alarmed, he, upon being awoke by an unusual noise amongst his poultry, had got up and gone to ascertain the cause; that on his doing so he found that a skunk had contrived to get admission into the hen-roost; and that, after a combat of some duration, he had succeeded in killing it. This explained the whole mystery of the approaching dreadful calamity! The sulphurous vapours were neither more nor less than the offensive effluvia given out by the alarmed animal when attacked by the old Yankee, although the distance between the two dwellings was fully 500 yards!

On another occasion a skunk passed along the skirts of a piece of woodland at the distance of about 150 yards from our dwelling-house, when the offensive stench was so powerful, that some loaves of bread that were shut up in a closet in the pantry became so strongly impregnated that the family could not use them.

Except its occasional depredations in the hen-roosts, it may be generally considered a harmless creature; for it never wages war with other animals except in the manner before mentioned—that is, by stinking them out of the field of combat.

WINCHESTER MARKET-CROSS.

THE origin of market-crosses seems obvious enough. The figure of the cross during the middle ages was the grand symbol of religion. It was placed everywhere—in churches, churchyards, by the road-side, to stimulate the devotions of the traveller, on spots where some event had occurred, the memory of which it was wished to perpetuate; and in public places where the people were in the habit of congregating. The use of the cross, therefore, to indicate the market-place, arose very naturally from the veneration paid to it. It both served as a rallying point, and was also intended to excite devotional feelings in those assembled for the purpose of buying and selling. A large number of market-towns were in the immediate neighbourhood, and stood on the soil, of abbeys. The country-people who came to dispose of their grain, poultry, eggs, butter, &c., had to pay certain tolls on their commodities; these were generally collected at the "cross," or market-place; and frequently advantage was taken of the assembling of the people, to address them from the cross on some particular topic. By an easy transition, the term "cross" came to be applied, not to the figure which marked the spot, but to the entire spot itself. Almost every town in Britain has its "cross" or public place.

The first crosses were simple in their construction—if composed of stone, consisting merely of a single shaft, generally slightly elevated, and surmounted by a cross. Gradually they were converted into little structures or buildings, of various forms, and adorned according to the taste or liberality of the founders. In No. 113 of the 'Penny Magazine,' is a representation of Waltham Cross, which is of another class, being a funeral cross, and erected by Edward I. to mark the different spots where the body of his queen rested, on being conveyed to Westminster Abbey. In No. 253, there is a representation of Malmesbury Cross, erected during the latter days of the Gothic, or rather the ecclesiastical architecture, when the idea was adopted of enlarging the area where the cross stood, and arching

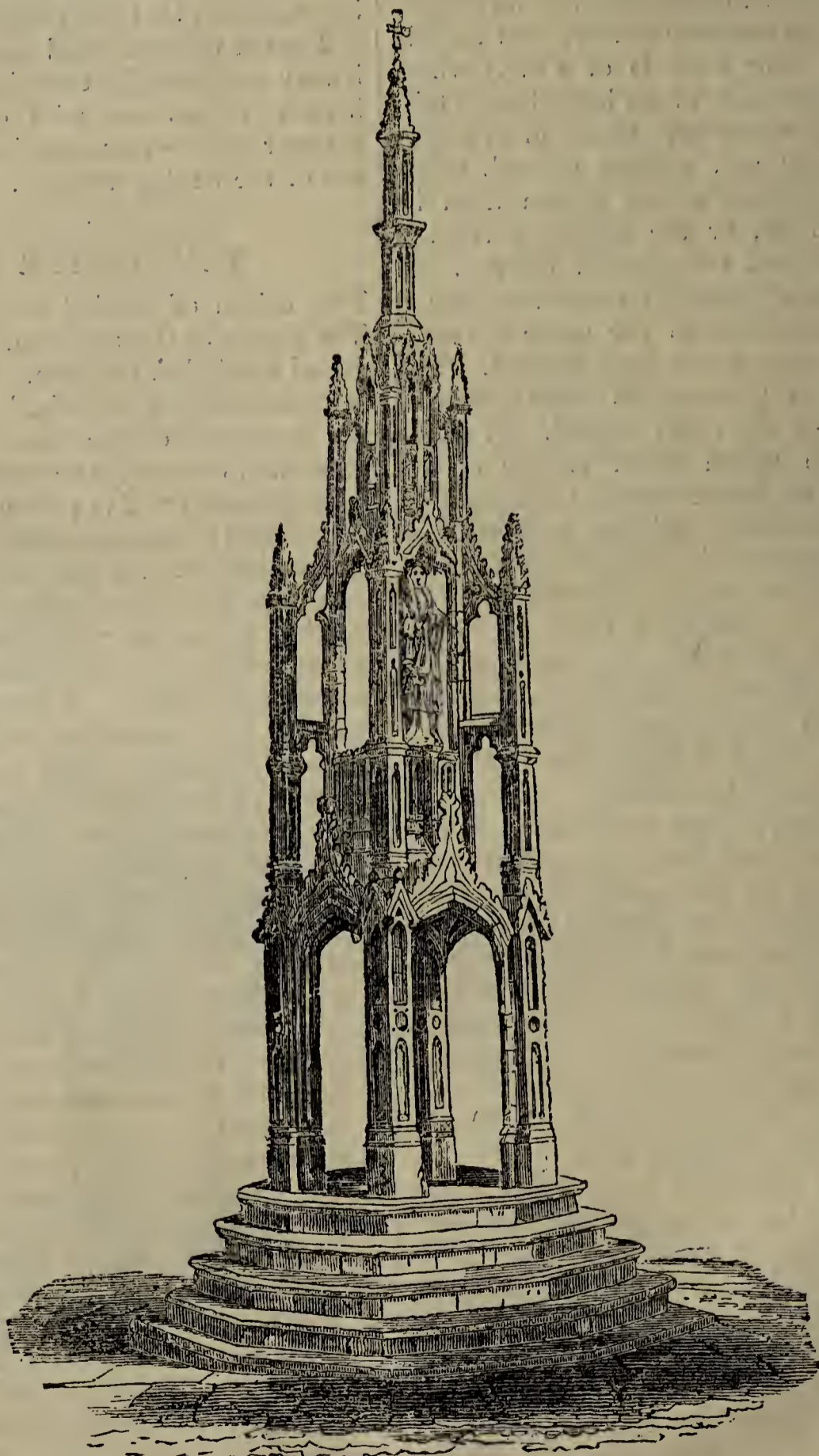
it over, so as afford a shelter during inclement weather, or, in the words of Leland, "for poore market folkes to stand dry when rayne cummeth." At the dissolution of the monasteries, almost every market-town in England had a cross, some of them exceedingly rich and elaborated in their architectural details. It is a matter of regret to the antiquary and the lover of ancient monuments that so few have been preserved.

The wood-cut represents the market-cross of Winchester. In its adaptation to the uses of a market it must yield to those of Chichester and Malmesbury; but as a work of art it is undoubtedly the finest market-cross remaining in England. It is much to the credit of the then inhabitants of Winchester, that they saved it from destruction in 1770. Some commissioners of pavements had either sold it, or bargained for its removal, and the workmen had actually assembled in order to commence operations, when a number of the citizens gathered together, and by their spirited remonstrances frustrated the attempt. There is a wide difference between the bigoted and blind attachment which would preserve an old relic at the expense of perhaps the health and convenience of an entire community, and the careless indifference which sees nothing in the monuments of our ancestors but a heap of stones. True discriminating taste takes the middle course; but this taste requires to be cultivated, and cannot be

supposed to exist in a people apart from some degree of knowledge. Mr. Britton terms the Winchester Market-Cross "a master-piece of art." The period of its erection is uncertain: but it is assigned, with every appearance of probability, to the fifteenth century. It is supposed that a more ancient cross occupied the site before the erection of the present one. The cross stands in the High Street of Winchester, nearly in the centre of the city. It is elevated on five stone steps, each of which gradually diminishes in size, and consists of three stories, adorned with open arches, niches, and pinnacles, surmounted with small crosses. It appears to have had four statues originally; but only one now remains, under one of the canopied niches on the second story. This is generally said to be St. John the Evangelist; but ecclesiastical antiquaries are of opinion that it represents some martyred saint, from the circumstance of the statue "bearing a palm-branch, the sure token of a martyr." Mr. Britton gives the following dimensions:—

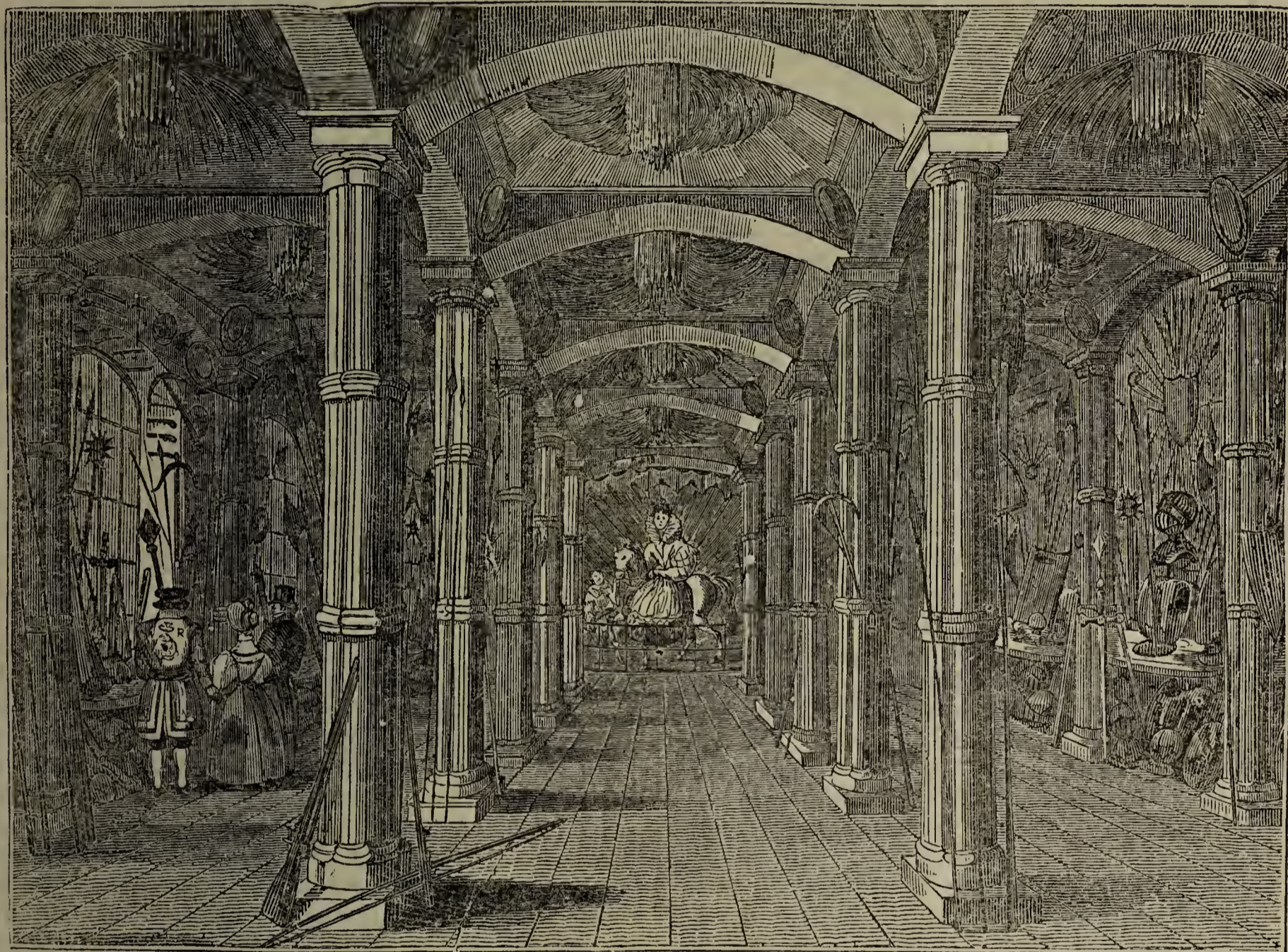
"It now measures $43\frac{1}{2}$ feet from the ground to the summit. The lower tier of arches is 7 feet 10 inches high, and the statue is 5 feet 10 inches."

The cross is still popularly called the "Butter Cross," the dealers in butter having been in the habit of vending their particular commodity here down to the year 1772, when a new market-house was erected



[Winchester Market-Cross.]

THE TOWER OF LONDON.—No. II.



[Queen Elizabeth's Armoury.]

THE armoury, now termed "Queen Elizabeth's" by a recent order of the Board of Ordnance, was long shown to the visitors of the Tower as the "Spanish Armoury." This title was given to it from a belief that it contained weapons, instruments of torture, &c., taken from the Spanish Armada. The armoury is contained in a building which was rebuilt a few years ago, opposite to the south-western angle of the White Tower. The term "Spanish Armoury" first occurs in an item "for mending the windows," in a statement of Tower expenses in 1675. But this armoury does not contain, in all probability, a single article which constituted the spoils of the Armada. There is a small instrument, termed in the catalogue "an iron collar of torture," which is still asserted to have been actually taken from the Spanish fleet; but even this is doubtful. All the weapons contained in this armoury, with a few exceptions, belong to the fifteenth and sixteenth centuries, and are mostly of English manufacture. The name has therefore been very properly changed, as the old title propagated a gross and unmeaning delusion.

Dr. Meyrick, in his 'Critical Inquiry,' quotes a 'Survey of the Military Stores at Greenwich,' made in the reign of Charles II., upon which he comments as follows:—

"From this curious survey we learn that the armour now in the Tower came from Greenwich and other places; and as in the statement no mention is made of the Spanish armoury, we may fairly conclude that it did not then exist. The targets with pistols in them were in the Tower in the reign of Edward VI., and therefore could not, as said, have belonged to the Armada. The pikes in it were common to the English soldiery as well as the Spaniards; and the glaives, bills, halberds, pertuisans, &c., which principally compose this collection, were used in England in the reign of Henry VIII. The instrument of torture, and the Catholic banner*, may have been part of the Spanish spoils; but it is probable that the remainder were furnished from the stores in the Tower. Indeed, it has

* The instrument of torture is a small thick iron collar, studded inside with spikes; and the "Catholic banner," which was formerly shown as the "invincible banner of the Spanish Armada," is justly described by Messrs. Britton and Brayley as "nothing more than the leathern covering of a *pavois*, or shield, of an oval form, on the middle part of which was placed [formerly] a small figure of our Saviour on the Cross, depicted upon thin card or pasteboard." It is strung round with short swords, the brazen handles of which are disposed so as to appear round the edge, which is calculated to puzzle the visitor as to the real nature of this "Catholic banner."

been observed that there was a sale by lottery of a quantity of foreign armour in the 29th of Elizabeth, which was probably that of the Armada, and thus sold to produce a part of the prize-money due to the captors."

At the head of the room which contains this collection of weapons and armour is a figure of Queen Elizabeth, with her horse led by a page. This figure was formerly partly vested in armour, and represented as in the act of addressing the troops in the camp at Tilbury. But this being at variance with historical propriety, it has been habited in a "counterfeit resemblance" of the garb worn by Elizabeth when she went to St. Paul's in procession to celebrate the defeat of the Armada. It may be remarked, however, that the queen did not go on that occasion to St. Paul's on horseback, but "in a triumphal car, ornamented with the spoils and ensigns of the enemy."

The Grand Storehouse occupies, as already has been stated, the north side of the Inner Ward of the Tower. It is an extended brick building, 345 feet in length and 60 feet in width. It is three stories high, and is surmounted by a small turret which contains the garrison clock. This building was commenced in the reign of James II., and finished in that of William and Mary; who, on its completion, entertained their court in it with a sumptuous dinner. On this occasion the workmen and labourers employed in the construction of the building attended on the royal party in white gloves and aprons, as badges of freemasonry.

The ground floor still bears the name of the "Train of Artillery," from having been formerly a depôt, or storeroom, for ordnance intended for field service, but which have been removed to Woolwich. It is now used as a depository for small arms, packed in chests ready for issue.

A portion of this ground floor is reserved for the exhibition of a number of curiosities. These consist principally of rare or singular specimens of ordnance of every age of the art of cannon founding. The catalogue commences with a gun made of wrought iron, assigned to the time of Henry VI. Amongst the number is an iron gun, recovered from the wreck of the Royal George, which, with its carriage, is encrusted with marine products, and much decayed; of this gun a wood-cut is given in the present Number (p. 300). A brass 24-pounder, recovered from the same wreck in 1834, and which, after lying fifty-two years under water, is in excellent preservation; a curious brass cannon, brought from Java in 1811, which has a Persian inscription; ten small cannon, presented to Charles II. when a boy, by the brass founders of London; relics of celebrated ships, among which is the steering-wheel of Nelson's ship, the Victory, &c. &c. The staircase leading to the floor above, which contains the great collection of small arms, is adorned with a variety of figures; one of which is a military trophy, consisting of arms and weapons, ancient and modern, tastefully arranged. Over this trophy is a bust of the present king, and of two inscriptions; one records that the armoury was honoured with the presence of William IV. and Queen Adelaide on August 5, 1830; and the other, that the kettle-drums in the trophy were taken at Blenheim by the Duke of Marlborough, and the guns at Waterloo by the Duke of Wellington. Upon the walls of the staircase, at each side, there are two large stars formed of swords, brass scabbards, bayonets, and pistols. There are also different figures, representing knights in armour, &c.

The "Small-arms Armoury" is a truly magnificent room. It extends the entire length of the building. Round the room is a singular and beautiful cornice, which is composed of drums, pistols, and pieces of armour, admirably arranged; the wood-cut represent-

ing a portion of it will give a better idea of its arrangement than a verbal description (p. 300). The walls of this spacious room are covered with an immense variety of ornaments and devices, of various forms, composed of muskets, pistols, bayonets, spears, halberds, &c. These represent stars, serpents, gates, and other figures; some of which, of difficult formation, are assisted by head and tail pieces carved in wood. The centre of the room, leaving a small space to walk round on each side, is occupied by racks which reach from the floor to the ceiling, on which are piled from 100,000 to 150,000 muskets, ready for delivery. The barrels of the greater part of these are kept burnished; when delivered out, they are browned for the land-service and blackened for the sea service.

The crown jewels are kept in a small tower immediately beyond the east end of the Grand Storehouse, described in an old statement as a "prison lodging." These jewels were placed in the Tower as early as the reign of Henry III., from whence they were repeatedly taken by different monarchs, when their necessities drove them to pawn them. Under Henry VIII. the office of keeper of the jewels was held by the celebrated Cromwell, afterwards Earl of Essex. His salary was only 50*l.* yearly; but his perquisites were considerable, as he had the custody and purchasing of the royal plate, and the appointment of the king's and queen's jewellers and goldsmiths. After the Restoration, the office was conferred upon Sir Gilbert Talbot, when the emoluments were reduced; yet, notwithstanding, the emoluments arising from the office during Charles II.'s reign are stated to have amounted to 1300*l.* annually. It was while Sir Gilbert Talbot held the office that permission was first given to exhibit the crown jewels to the public, which led to Blood's attempt to steal the crown, &c.

Talbot had assigned the profits of exhibiting the regalia to an old servant of his father's, named Edwards, who had the charge of the jewels at the time of the attempted robbery. The following is the account of this affair, which was given in the 'London Gazette' at the time:—

"Whitehall, May 9, 1671. This morning, about seven of the clock, four men coming to Mr. Edwards, keeper of the jewel-house in the Tower, desired to see the royal crown [the regalia] remaining in his custody; he carries them into the room where they were kept and shows them; but according to the villainous design they, it seems, came upon, immediately they clap a gag of a strange form into the old man's mouth, who making what noise and resistance he could, they stabbed him a deep wound in the belly with a stiletto, adding several other dangerous wounds on the head with a small beetle they had with them, as is believed, to beat together and flatten the crown, to make it the more easily portable; which having, together with the ball [orb], put into bags they had to that purpose brought with them, they fairly walked out, leaving the old man grovelling on the ground, gagged and pinioned; thus they passed by all the sentinels, till, in the mean time, the son-in-law of Mr. Edwards, casually passing by, and hearing the door shut, and some bustle, went in to look what it might be, where he found his old father in the miserable condition they had left him; whereupon, running out in all haste, and crying out to stop the authors of this horrid villainy, the persons began to hasten more than ordinary, which the last sentinel perceiving, and hearing the noise, bid them stand; but instead of standing to give an account of themselves, one of them fires a pistol at the sentinel, and he his musket at them, which gave the alarm, so as, with the pursuit of Mr. Edwards' son-in-law, two of the malefactors were immediately seized; two more, with another that held their horses without the Tower-gate,

escaped; with the two that were taken were found the crown and ball, only some few stones missing, which had been loosened in the beating the crown together with the mallet or beetle spoken of.

"These two being brought down to Whitehall by His Majesty's command, one of them proves to be Blood, that notorious traitor and incendiary, who was outlawed for the rebellion in Ireland eight years ago; and the other was one Perrot, a dyer in Thames Street. Within two hours after, a third was apprehended, as he was escaping on horseback, who proves to be Thomas Hunt, mentioned in His Majesty's proclamation for the discovering of the persons who some time since committed that horrid attempt upon His Grace the Duke of Ormond, but is indeed son [in-law] to the said Blood; who, with great impudence, confesses that they two were, with seven others, in that action. They are all three sent close prisoners to the Tower for the present."

It appears that Blood had made an acquaintance with Edwards before the time of the projected robbery, and that under a double pretence of introducing a nephew to a daughter of Edwards, between whom a match was to be made up, and also of showing the crown to some friends, who were to leave London during the day, he and his confederates repaired early in the morning to the Tower, and made the attempt detailed in the preceding account. The unexpected arrival of a son of Edwards, who had been abroad, disconcerted the conspirators, and led to their precipitate retreat, by which the project was defeated. When Blood was seized, and the crown wrested from him, he struggled hard to retain it, and on being overcome, said, "It was a gallant attempt, however unsuccessful, for it was for a crown!"

The strangest part of the affair is that Blood and his confederates were pardoned instead of being punished. His being examined before the King in person, when first apprehended, probably saved him from the gallows. He appears to have successfully worked on the King's fears and vanity by boldly avowing that, besides attempting the life of the Duke of Ormond, he had also stationed himself to kill the King among the reeds "by the Thames' side, above Battersea, where he often went to swim;" but that, "when he had taken his stand among the reeds for that purpose, his heart was checked by an awe of majesty." He also threatened that his death, if he were condemned, would be revenged by some one amongst a numerous band of conspirators with which he was connected; but that if he and his confederates were spared, as they had been daring to do mischief, so they would, "if received into pardon and favour," be as bold to "perform eminent services for the crown." After being kept for some time close prisoners, they were pardoned.

Blood was taken into favour at court, and a pension conferred on him. "For several years applications were constantly made to the throne through the mediation of Colonel Blood; and the indulgence shown to him became a public scandal. Rochester has the following lines in his 'History of Insipids:'—

"Blood, that wears treason in his face,
Villain complete in parson's gown,
How much he is at court in grace,
For stealing Ormond and the crown!
Since loyalty does no man good,
Let's steal the king and out-do Blood."

"The last line but one probably alludes to old Edwards, who with difficulty obtained an order upon the Exchequer for a payment, in reward for endeavouring to save the crown, of 200*l.*, and another to his son of 100*l.*; both of which remained so long unpaid, that

the parties were each obliged to sell the orders for half their value.

"When the ministry styled the 'Cabal' fell to pieces, Colonel Blood's consequence at court declined. He then became an enemy to his former patron, the Duke of Buckingham, for a conspiracy to fix a scandalous imputation upon whom he was convicted in the court of King's Bench, and committed to prison; but finding bail, was allowed to retire to his house in the Bowling Alley in Westminster, where, from disease heightened by disappointed feelings, he died August 24th, 1680.

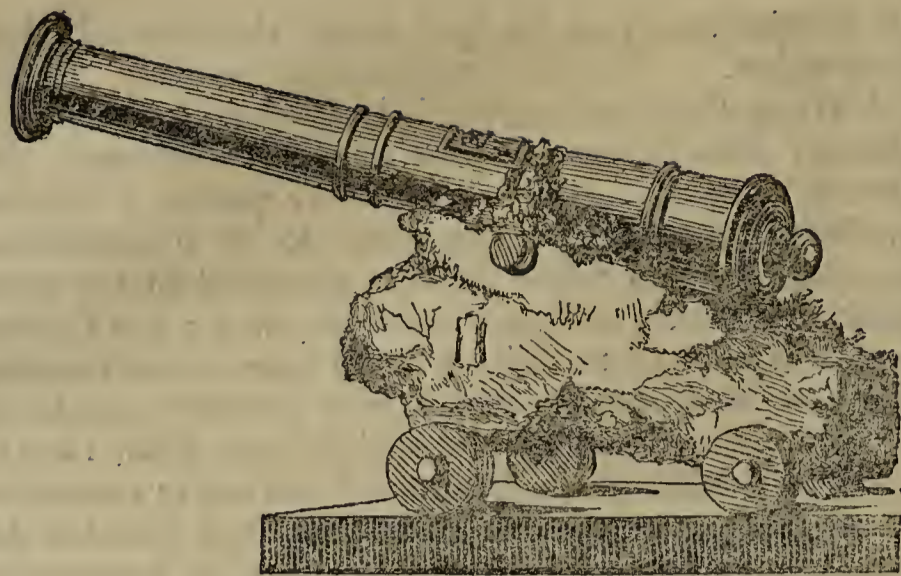
"The Society of the Literary Fund are in possession of two daggers: the one used by Colonel Blood in his attack upon Edwards, the other by an accomplice. The inscriptions on the sheaths of each record the facts. They came to the society, with other residuary property, by the bequest of Mr. Thomas Newton."—*Penny Cyclo-pædia*, article Blood, Thomas, in vol. v.

Since Blood's attempt no person is permitted to see the regalia without the attendance of a warder. The jewels are kept in a dark recess on the ground floor of the Jewel Tower, fenced off from the spectators by a strong iron railing. The place is lighted by argand lamps. This small but valuable collection is arranged on shelves, except the new crown made for George IV., and a piece of plate, called the "Saltseller of State," which are placed on each side, on revolving stands, within glass bells. There are five crowns and five sceptres, with a golden staff or rod, four feet seven inches in length, and which weighs 8 lbs. 9 oz. This is called the "staff of Edward the Confessor," and is carried before the king at a coronation. The "salt-seller of state" is termed a "Model of the White Tower," but, as remarked by Messrs. Britton and Brayley, it has scarcely any other resemblance than from the body of it being castellated and of a square form. It is of gold, richly adorned with jewelry, and ornamented at its base with mimic cannon, serpents, and grotesque figures.

In addition to these there are three swords, the *curtana*, or pointless sword of mercy, and the two swords of justice, temporal and ecclesiastical, which are of steel gilt, and preserved in embroidered velvet scabbards; the royal spurs, of gold, carried in the coronation procession by the representative of the earls of Hastings; the armillæ, or coronation bracelets; the ampulla, or golden eagle, an antique vessel of gold, used for containing the oil at coronations, resembling an eagle with expanded wings, standing on a pedestal; the king and queen's golden orbs, the use of which is borrowed from the practice of the Roman emperors, who carried a globe or orb, as implying universal dominion. There are also a number of articles of plate of curious construction, used on occasion of a coronation.

One of the sceptres in the collection was found behind a part of the old wainscoting of the Jewel Room in 1814. It is supposed to have been made for Mary, the consort of William III. The crown, which was superseded by the one made for George IV., was made for Charles II., in imitation of one which had been abstracted during the civil wars.

The most splendid article in the collection, is unquestionably the new crown made for the coronation of George IV. "It is about fifteen inches in height, and the arches which rise almost to a point, instead of the inelegant flatness of the former crown, are surmounted with an orb of brilliants, seven inches in circumference. Upon this is placed a Maltese cross of brilliants, set transparently with three pearls at its extremities, of remarkable size and beauty. The arches are wreathed, and fringed with diamonds. Four Maltese crosses, formed of brilliants also, surround the crown, with four



[Gun raised from the wreck of the Royal George.]

large diamond flowers in their intervening spaces. In the centre of the back cross is the ancient ruby, which was worn at Cressy and Azincour by the Black Prince and Henry V., whilst that of the front cross is adorned with a unique sapphire of the purest and deepest azure, more than two inches long and one inch broad. The ermine is surmounted with a band of large diamonds, emeralds, sapphires, and rubies, and immediately under these is a fillet of beautiful pearls. The cap is of dark crimson velvet. The estimated worth of the crown is 150,000*l.*, and the expenses upon it, preparatory to the coronation, amounted to about 50,000*l.* or 60,000*l.* over and above the inestimable sapphire*."

Until the reign of James II. it was the custom for each monarch, previous to being crowned, to hold a court in the Tower, and then proceed in state through the city to Westminster. These occasions were regarded by the "crafts of London" as peculiarly for their amusement and gratification. Some of these events were celebrated with all the rude munificence of the age. On the coronation of Richard II.—shortly before the outbreak of Wat Tyler and his followers—the king, dressed in white robes, issued from the gates of the Tower, accompanied by an immense assemblage of nobles, knights, and esquires. The streets through which he passed were adorned with drapery, the conduits ran wine, and pageants were exhibited in all the principal thoroughfares. Amongst these was a castle with four towers stationed in Cheapside; from two sides of this "the wine ran forth abundantly, and at the top stood a golden angel, holding a crown, so contrived that, when the king came near, he bowed down and presented it to him. In each of the towers was a beautiful virgin, of stature and age like to the king, apparelled in white vestures, the which blew in the king's face leaves of gold and flowers of gold counterfeit." On the approach of the cavalcade the damsels took cups of gold, and filling them with wine at the spouts of the castle, presented them to the king and his nobles.

The procession on the coronation of Elizabeth was also one of the most splendid of those festivals. James I., on his accession to the throne, held his court in the Tower; but on account of the plague, then raging, the customary procession through the city was omitted. As the citizens, however, had made preparations for the fete, and were disappointed, he gratified them, in the subsequent year, by a procession from the Tower to Westminster, on the occasion of opening Parliament. The plague was the cause also of the procession being omitted on the accession of Charles I. But the ceremony was revived by Charles II. with increased splendour, which is described to have been so magnificent, that "even the vaunting French confessed their pomps of the late marriage with the Infanta of

* 'Monthly Magazine,' May, 1821.



[Cornice of the Small-arms Armoury.]

Spain, at their majesties' entrance into Paris, to be inferior in state, gallantry, and riches to this most glorious cavalcade from the Tower." The ceremony was omitted by James II., and has not been since revived.

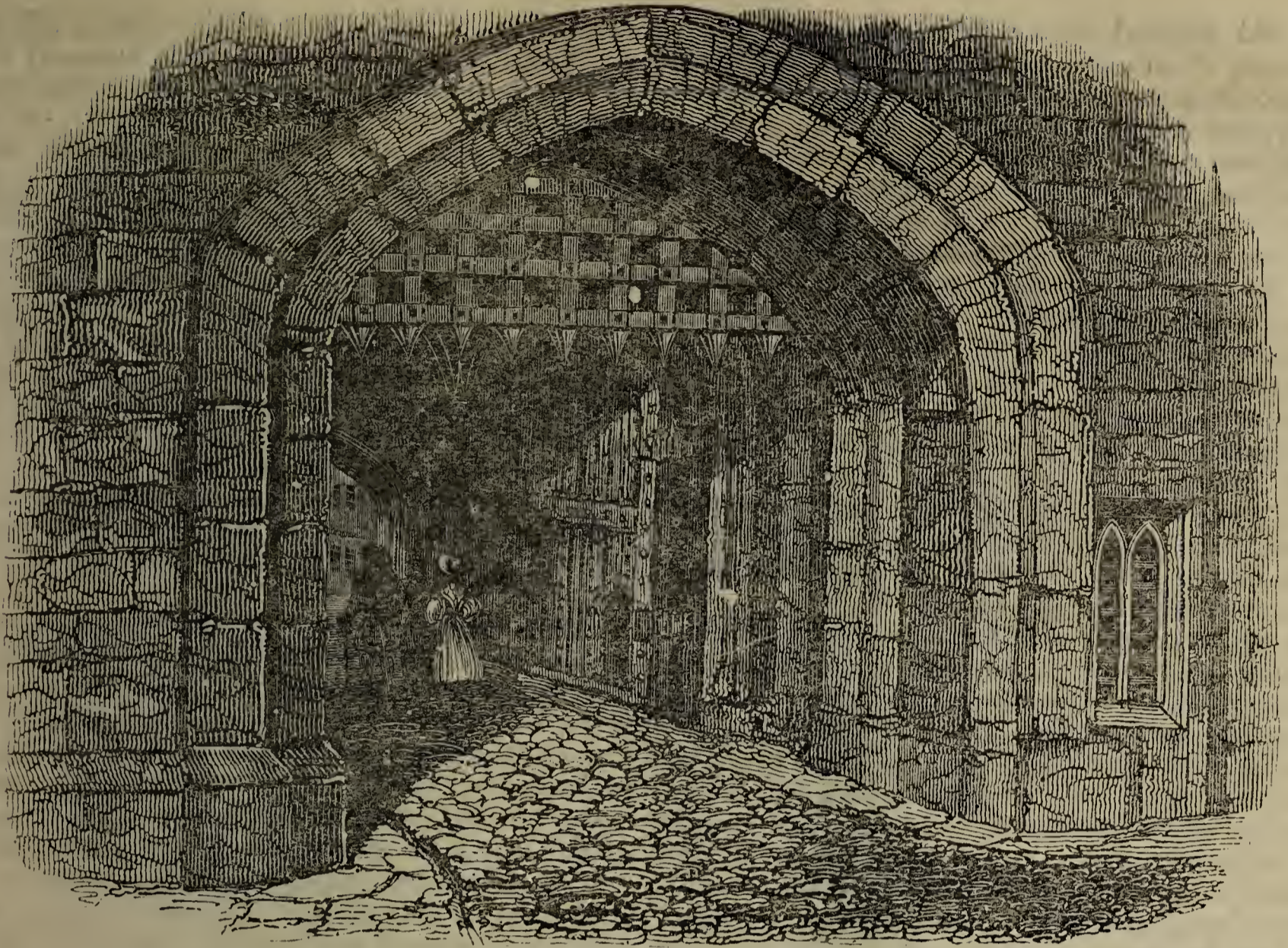
The annals of the Tower, especially as a state prison, are far too voluminous to be minutely entered into here. They are interwoven with the history of the country, and would require a large space to render them interesting and intelligible. We may notice a few of the more remarkable scenes of oppression and "foul and midnight murders" which stain its records.

The Tower was a busy place during the long and victorious reign of Edward I. At intervals it was crowded with Scotch and French illustrious prisoners. Amongst these were William Wallace, just before his ignominious execution, and the kings of Scotland and France, David Bruce taken at the battle of Neville's Cross, and John, with his son Philip, at the battle of Poitiers.

In the reign of Richard II., while the king was gone to Mile End to hold a conference with Wat Tyler, a party of the insurgents broke into the Tower, overpowered the garrison, and committed various excesses in the palace. In the Tower, also, Richard formally resigned the crown to Henry IV.

Richard III., as Protector, and afterwards king, caused some of those scenes to take place within the Tower which Shakspeare has immortalized. The celebrated scene in the Council Chamber is conjectured to have occurred within the White Tower; and Hastings, when led out to execution, was taken to the green, now the garrison parade, and beheaded on a log of wood provided for repairing the Tower chapel.

The "Bloody Tower" forms the principal entrance from the Outer to the Inner Ward of the Tower. It is supposed to have acquired its name from the apartments over the gateway having been the residence, and the scene of the assassination, of Edward V. and his brother the Duke of York. That these young princes were destroyed by command of their uncle there appears no reason to doubt. But the time and mode of their murder are involved in all the obscurity of a dark and mysterious transaction. The circumstantial statement written by Sir Thomas More is liable to considerable suspicion of its general accuracy. But at all events the "Bloody Tower" was not the scene of the crime. This name may have become attached to it from other foul deeds being perpetrated within it on less distinguished personages than the royal youths. Their bodies were dug for in Henry VII.'s time, but were not found. In making a staircase in the White Tower after the Restoration, the labourers came to the bones of some corpses, covered with a heap of stones. Charles II. was so satisfied that these bones were the remains of the brothers, that he had them honourably interred in Henry VII.'s Chapel at Westminster. The propriety of assigning these remains, however, to the young princes is strongly questioned. Where they were murdered or buried is a matter of uncertainty; we only know that they were kept in the Tower by an uncle who had deprived the eldest of his rightful throne; that they both suddenly disappeared; and that they were doubtless removed out of the way of an ambition



[Gateway of the Bloody Tower.]

which, in those semi-barbarous times, neither scrupled to shed blood, nor failed of finding instruments to accomplish its designs. Bad, however, as was the character of Richard III., Shakspeare's picture of him, mentally and personally, is coloured with poetry and popular attributes, not with truth. We have no reason to conclude that, though he was small in stature, he was a "crook-backed" tyrant.

A reference to the wood-cut will enable the reader to appreciate "the bold and substantial character" of the gateway of the "Bloody Tower." It "forms a noble example of the strength and solidity which characterized the fortified gateways of past ages."

Sir Thomas More, whose history of the fate of the young princes embodies all that has been popularly believed concerning them, was himself committed a prisoner to the Tower, and lost his life on Tower Hill. "Of the inexhaustible fund of humour possessed by this eminent minister, the following are remarkable instances:—When he was conveyed a prisoner to the Tower, the porter having, according to an ancient custom of the place, demanded his uppermost garment as a fee, Sir Thomas presented him with his cap, telling him that *that* was his uppermost garment, and that he wished it was of more value. On being led to Tower Hill to execution, a female reproached him for detaining some deeds whilst he was in office. 'My good woman,' said he, 'have patience a little, for the king is so gracious to me, that within this half hour he will discharge me of all my business, and help thee himself.'" Even at the block his accustomed good-humour did not forsake him. As he ascended the scaffold, he requested one of the guards to assist him, adding, "When I come again, let me shift for myself." At the time of laying his head upon the block the executioner begged his forgiveness. "I forgive thee," quoth he, "but, prithee, let me put my beard aside, for that never committed treason*."

Of the numerous prisoners confined in the Tower

* 'Tower Memoirs,' p. 62.

during the fifteenth century, many of whose lives were taken away without any moral or political necessity, the cases of Anne Boleyn and Lady Jane Grey are the most affecting. There is no existing evidence by which we can decide as to the positive guilt or innocence of Anne Boleyn. The character of Lady Jane Grey has given a kind of moral sublimity to her fate. In Ellis's 'Original Letters' there are some interesting particulars respecting Anne Boleyn from the pen of Sir William Kingston, who was lieutenant of the Tower at the time, and had her in custody. On her being committed, she asked him if she was to go to a dungeon? "No, Madam," was the reply; "you shall go into your lodging that you lay in at your coronation." This was a painful remembrancer. "'It is too good for me!' she exclaimed; 'Jesu have mercy on me!' and kneeled down, weeping apace; and in the same sorrow fell into a great laughing, and," the account continues, "she hath done so many times since." Mr. Turner remarks, that those who have seen females under the involuntary effects of hysterics, or nervous disease, will not be disposed to call this convulsive laughter levity.

When all hope was over, she gathered up her courage, and died with great firmness. Kingston relates that, "the day before she suffered, she said to him, 'Mr. Kingston, I hear say I shall not die afore noon, and I am very sorry therefore; for I thought to be dead, and past my pain.' I told her it should be no pain, it was so subtle. And then she said, 'I hear say the executioner was very good, and I have a little neck;' and put her hand about it, laughing heartily."

Lady Jane Grey reigned as Queen of England eleven days. Her life was spared for a considerable time after Mary's accession; but Wyatt's insurrection, with which she had no connexion, was made the pretence of putting her and her husband to death. "It is a pity," says Turner, "that, by one moment's weakness of acquiescence, this interesting woman brought the ruin on herself which a continued firmness would have averted."

Elizabeth was, for a period, closely confined in the

Tower, and acquired there a portion of that education and training which prepared her for her long and splendid reign. She was accused of being privy to Wyatt's rebellion, and though she denied it, and wrote a most energetic letter to her sister praying for inquiry, the Earl of Sussex and others were ordered to convey her to the Tower by water. A few hours' delay had been granted for the transmission of the above-mentioned letter, but "when the tide the next morning suited, the two lords told her it was time to depart. As she came into the garden, she cast her eyes towards the windows, hoping to have seen her sister, but did not. She expressed her wonder, not very discreetly, that the nobility of the realm would suffer her to be led into captivity. But no one interfered for her. A command was issued through London that every one should keep the church, and carry their palms (it was Palm Sunday, Feb. 1554), that she might in the meantime be conveyed without any concourse of the people.

"On reaching London Bridge they could not shoot the arch, and lay hovering upon the water for a time. The danger was too great for the bargemen to plunge into it as they were ordered. Their unwillingness gave way to peremptory command, but in trying it again the stern of the boat struck the ground, 'the fall was so big, and the water was so shallow.' The boat paused awhile under the bridge, and at last cleared it. She objected to being landed at the Traitor's Stairs, 'neither well could she, unless she should go over her shoe.' One of the lords said she must not choose, and, as it rained, offered her his cloak. She dashed it from her, and, as she put her foot on the stairs, exclaimed, 'Here lands as true a subject, being prisoner, as ever landed at these stairs. Before thee, O God! I speak it, having no other friends but thee alone.'

"As she landed, she saw a great number of the warders standing in rank. 'What need all this?' was her inquiry. She was told it was usual when any prisoner came. 'If it be for my cause, I beseech you that they may be dismissed.' The poor men knelt down, and prayed for her preservation. Passing on, she sat down on a cold stone, and there rested herself. The lieutenant begged her to come out of the rain. She replied, 'Better sitting here than in a worse place.' She was taken to her confinement, and the doors were locked and bolted upon her, to her great dismay. The lords had a long conference how to keep the ward and watch, till Sussex wisely remarked, 'Let us take heed, and do no more than our commission will bear us, whatsoever shall happen hereafter. She is the king our master's daughter: therefore let us use such dealing that we may answer to it hereafter; for just dealing is always answerable.' The other lords agreed that it was well said, and so departed."—*Foxe*, 1896, quoted by *Sharon Turner*.

After her accession, when leaving the Tower for the purpose of being crowned, the remembrance of her former situation here occurred to her so strongly, that she stopped before she entered her chariot, and uttered a short prayer, saying, "O Lord Almighty and everlasting God! I give thee most hearty thanks, that Thou hast been so merciful to me as to spare me to see this joyful day. I acknowledge that thou hast dealt as wonderfully and as mercifully with me, as thou didst with thy faithful servant Daniel, whom thou deliveredst from the cruelty of the raging lions. Even so was I overwhelmed; and delivered only by Thee. To Thee, therefore, alone be thanks, honour, and praise for ever."

Among the different towers round the Inner Ward, of which most were at times used as "prison lodgings," the Beauchamp Tower is the most interesting, from containing numerous memorials of the prisoners. It is

situated in the central part of the western side of the ward, on the garrison-parade, and is supposed to have derived its name from Thomas Beauchamp, Earl of Warwick, who was confined here in 1397. In 1796, in making alterations on the apartments, in order to convert the building into a mess-house for the officers of the garrison, a number of inscriptions, devices, and coats-of-arms, doubtless the autographs of the persons whose names are attached to them, were discovered on the walls. The tower consists of two stories,—the principal apartment on the ground-floor is now used as the mess-room. "In the upper apartment a heavy iron grating in front of a window still denotes its former appropriation; the floor, also, which is constructed of thick oaken planks, studded with large iron nails, assimilates in character, from being worn hollow in different parts, as though by the melancholy, constant tread of those persons who have been immured in this chamber."

In the mess-room, among other inscriptions, there is a pious sentence written by Howard, Earl of Arundel, with his name and the date, "June 22, 1587." There is also a well executed device by John Dudley, Earl of Warwick, and eldest son of the Duke of Northumberland, who was confined in the Tower with his father and brothers, for participating in the attempt to make Lady Jane Grey Queen of England. Some of the sentences by humbler prisoners indicate either resignation or impatience. One by a Charles Bailly, who was implicated in one of the plots of Elizabeth's reign, and who repeatedly suffered the punishment of the rack in the Tower, intimates that "The most unhappy man is he that is not patient in adversities: for men are not killed with the adversities they have, but with y^e impatience which they suffer." Another, in old Italian, signed by a William Tyrrel, 1541, is in a desponding spirit: "Since fortune hath chosen that my hope should go to the wind to complain, I wish the time were destroyed; my planet being ever sad and unpropitious." On other parts of the walls are, an autograph of Thomas Fitzgerald, eldest son of the ninth Earl of Kildare, and Lord Deputy of Ireland in the reign of Henry VIII., who was hanged and quartered at Tyburn in 1537; the word "IANE," supposed to have been written by Lord Guildford Dudley, the husband of Lady Jane Grey; the letters "R. D." attributed to the celebrated favourite of Elizabeth, Robert Dudley, Earl of Leicester, who was confined in the Tower during Queen Mary's reign; with a number of other inscriptions. The most interesting memorial in the upper chamber of the Beauchamp Tower is a device with the name "Thomas Salmon," the date "1662;" Latin sentences, and a minute calculation: "close prisoner 8 monethes, 32 wekes, 224 days, 5376 hovres."

Another tower at a little distance from the Beauchamp Tower, and situated at the north-east angle of the Inner Ward, immediately behind St. Peter's (the Tower) Chapel, is called the Devereux Tower, from having been the residence in 1601 of Robert Devereux, Earl of Essex, the rash and impetuous favourite of Elizabeth. He was beheaded on a scaffold within the Tower, on what is now the garrison parade; but the majority of male state-prisoners who suffered death were decapitated on the scaffold which stood on Tower Hill, outside the fortress.

Sir Walter Raleigh, who in his youth had been confined for a short period in the Tower by Elizabeth, afterwards inhabited it during many years previous to his expedition to Guiana, and execution.

The history of the Tower during the reigns of the Stuarts, and the interregnum, is but an epitome of the the rise and progress of constitutional liberty. One

case of oppression which occurred in James I.'s reign is affecting. Arabella Stuart, the near relative of the king, a young lady of considerable personal attractions, was thrown into the Tower under the pretence of having committed an offence by a private marriage without the king's knowledge. Her husband and herself escaped in different vessels for the continent; but she, lingering near the coast in expectation of meeting him, was retaken. After four years' captivity, broken down by calamity, she died a wretched idiot. "How vicious," exclaims a writer, "must have been the moral and political organization of society, when one human creature could exercise over the life and happiness of another, this monstrous abuse of power*."

In Charles I.'s reign, Lord Loudon, one of the commissioners sent to England by the Scotch Covenanters, was committed to the Tower for having affixed his name to a letter addressed to the king of France. It is stated that the king sent a warrant to Sir William Balfour, the Lieutenant of the Tower, for Lord Loudon's execution. At Loudon's request, Balfour went to the Marquis of Hamilton, and with him proceeded to the palace to intercede for the prisoner's life. The king had retired to rest, but the lieutenant being informed that, by virtue of his office, he was privileged to knock at the king's door at any hour of the night, boldly demanded admission. Their entreaties were for some time unavailing; but on the Marquis of Hamilton intimating that an insurrection would be probably the result of Loudon's death, the warrant was recalled, and Lord Loudon was shortly afterwards released.

Few persons of note were confined in the Tower in the early part of the eighteenth century, except after the rebellion of 1715. The last individuals who were decapitated on the scaffold on Tower Hill were four of the Scotch lords who were concerned in the rebellion of 1745. In the latter part of the eighteenth century the excited state of public feeling brought a number of prisoners within its walls. Sir Francis Burdett was imprisoned in it in 1810; and the individuals concerned in the plot to assassinate certain members of the government, in 1820, were the last state prisoners confined in the Tower.

The chief government of the Tower of London is vested in a Constable, who is at present the Duke of Wellington. Though the post is now almost a nominal one, being "more regarded as a station of honour and personal compliment, than of actual service and duty;" it was formerly one of consequence and importance. The Constable of the Tower was formerly termed the "Constable of London," the "Constable of the Sea," and the "Constable of the Honour of the Tower," which titles appear to have been bestowed indiscriminately. After the erection of the White Tower, the original Tower of London, as stated in the previous supplement, William the Conqueror is said to have conferred the post of being its governor, or constable, on Geoffry de Mandeville, in reward for his services at the battle of Hastings.

The Constable of the Tower, by virtue of his office, had various peculiar privileges. Besides possessing the custody of the fortress, he had the power of restraining merchants and other individuals from quitting the port of London; he could permit others to export prohibited commodities—could take security from the owners of vessels that they should not traffic with the king's enemies—could, at his discretion, prevent what was called forestalling, and restrain ships of the Cinque Ports from carrying grain out of the realm, &c. In

addition to his salary he had a great number of perquisites. From various documents quoted by Mr. Bayley in his 'History of the Tower,' it appears that, in addition to his salary, the constable received, in the reign of Edward II., the rents and profits arising from certain tenements within the precincts of the Tower belonging to the crown, as well as a number of fees levied from individuals, from fishing vessels, and a "custom" of twopence from each person going and returning by the Thames on a pilgrimage to St. James's shrine. In the reign of Richard II. the constable received a yearly salary of 100*l.*, with fees from his prisoners, according to their rank, "for the suit of his irons." In the reign of Elizabeth the constable's salary, in addition to his fees, was 100*l.*; it is now 1000*l.* per annum, "besides perquisites, which are considerable."

The lieutenant of the Tower is an officer next in rank to the governor, or constable. He was formerly appointed by the constable, but the office is now held under letters patent. Like the constable, the lieutenant has, in addition to his salary, various fees and perquisites. The ostensible duties of the constable and the lieutenant are performed by the deputy-lieutenant and the Tower major.

The subordinate officers consist of a gentleman-porter, who had formerly the custody of the gates and superintendence of the warders on duty. His duties are now performed by the yeoman-warder. The gentleman-gaoler, who had the custody and locking up of state prisoners, but whose duties are now happily nominal. "The yeomen-warders, of whom there are now forty, were originally persons employed by the lieutenant to keep watch over the prisoners, and to perform other necessary duties; but in the reign of Edward VI. the Duke of Somerset, in return for the attention and respect which they paid him whilst in confinement, caused them after his liberation to be appointed extraordinary yeomen of the guard; and they have ever since worn the livery of that body. Their duties are now almost nominal, and their time is chiefly occupied in performing the self-created office of guides or escorts to strangers who visit the fortress*."

There are a number of other officers—a chaplain, surgeon, apothecary, &c. The Board of Ordnance, being a government department, does not come under the head of the officers of the Tower.

The nature and extent of the liberties and privileges of the Tower were long a matter of dispute between its authorities and those of the city. As a royal fortress, palace, and prison, it was endowed with a jurisdiction independent of that of London itself. In Edward II.'s reign a mud wall was erected between the Tower ditch and the city outworks, which the civic authorities pulled down. They were compelled, however, to reconstruct it, and were fined 1000 marks for the alleged offence. In Edward IV.'s reign the officers of the Tower erected a scaffold on Tower Hill, which was asserted by the citizens to be within the liberties of the city; and after a dispute their plea was admitted, and recognised by royal authority.

The dispute respecting the Tower privileges was revived at intervals during two centuries, and on several occasions juries were empannelled to make presentments respecting its bounds, franchises, and liberties. In James II.'s reign, a formal and deliberate step was taken to set the question at rest. Letters patent passed the Great Seal, defining and establishing the boundaries of the Tower liberties; and its privileges were determined to consist "in the return and execution of royal writs within the Tower liberty; the right of holding a quarter-sessions, and of having a court-

* 'England,' in 'Cabinet Cyclopædia.'

* 'Memoirs of the Tower,' p. 209.

house and prison distinct from those of the city of London; the power of committing felons to Newgate; and of holding a court of record for the recovery of debts to any amount, the steward of which was to officiate as coroner within the liberty." The sessions were discontinued during the same reign in which the right to hold them was determined; and the right of jurisdiction, notwithstanding the official settlement of it, has been since occasionally questioned.

The number of persons returned in 1831 as residing in the Tower, exclusive of the garrison, was 433, of which number 253 were females.

The Tower of London, as the palace and chief fortress of the monarchs of England, has from time immemorial been a place of deposit for the national arms and accoutrements. It has also been the royal depôt for all the stores and armour which the principal military officers of the crown, and sheriffs of counties were required to provide on occasions of domestic or foreign warfare. Thus, when Geoffry de Mandeville was commanded to surrender the Tower to the Royal authority in 1213, 'the arms and other stores being therein,' were particularly mentioned; and in the second year of the reign of King Henry III., a mandate was issued to the archdeacon of Durham to transmit to this arsenal 'twenty-six suits of armour, five iron cuirasses, one iron collar, three pair of iron fetters, and nine iron helmets,' which had been left in his charge in the time of the preceding monarch. In the same reign frequent notices occur of the arms and warlike machines contained in the Tower; and occasional orders for payment of the armourers and other artificers employed therein; for removing engines thence to Dover Castle, and for depositing, in the former fortress, others which had been used at the sieges of Bedford and Biham. Similar writs are also extant of the respective reigns of the first and second Edwards*."

Before the general use of fire-arms, there were various officers in the Tower to whom were entrusted the care and repair of military weapons and armour. These were, the balistarius, or keeper and provider of crossbows; the attiliator balistarum, who provided the harness and accoutrements of the crossbows; the bowyer, who had the charge and provision of the bows; the fletcher and galeator, the first of whom superintended the making and delivery of the arrows for the use of the royal army, and the second attended to the helmets and head-pieces. There was also an armourer, whose business was the repairing and providing of other portions of military accoutrements. The offices held by these individuals were abolished in the reign of Charles II.

From existing records quoted by Mr. Bayley, there appears to have been, as early as the reign of Edward IV., an officer styled the "Master of the King's Ordnance," who had the chief charge of providing arms, ammunition, and stores, for the use of the army and navy. In that reign his allowance was eleven shillings per day for himself, and sixpence each for his clerk and valet.

Thomas Vaughan, who held the office of Master of the Ordnance in the reign of Henry VI., presented a memorial to the king, setting forth that no certain place was assigned for the keeping of the ordnance stores within the Tower, "for lack whereof there hath grown great hurt, and daily doth, unto the said ordnance and other stuff belonging to his said office," and praying for an assignment of a certain space of the Tower liberties. He obtained his request. The business of the Ordnance Office was, at an early period, transacted in some small houses behind the Tower

chapel, on the north-west of the Inner Ward. A new office was constructed on the south side of the Inner Ward, which was accidentally destroyed by fire in 1788. The present building occupies the site of the one destroyed; it is a handsome brick edifice.

The Record Office is in a tower near the middle of the southern side of the Outer Ward. The records of the kingdom appear to have been kept in the Tower since the Norman age, or shortly after its erection. These valuable national documents consist of grants, rolls of chancery, treaties, entries of royal and other national expenses, rolls of Parliament, and a vast variety of other important documents. They extend from the time of Edward the Confessor down to a recent period. The first attempt to render these documents easy of access was made by William Bowyer, the keeper of the records, in the reign of Elizabeth. He began to arrange them, and compiled six large folio volumes of digests and appendices. These, however, have been lost. An observation made by Elizabeth to a successor of Bowyer's, who presented her with a calendar or list of the records in his charge, indicates the progress of society. "In former times," said the queen, "force and arms did prevail, but now the wit of the fox is everywhere on foot, so as hardly a faithful or virtuous man may be found."

The office of Keeper of the Records has been held by many eminent men, distinguished for their literary acquirements. Among these perhaps the most remarkable was William Prynne, a voluminous writer, but whose most useful works are those connected with this office, namely, his 'Collection of Records,' in three vols. folio, and his edition of 'Sir Robert Cotton's Abridgment of the Tower Records.' Prynne was a man of great learning, and indefatigable industry. The vindictive and unjust sentence passed upon him for an alleged libel on the queen in his 'Histriomastix,' published in 1633, called forth the fortitude of his character, and exhibited the consistency and firmness of his principles. Prynne had succeeded the justly celebrated Selden, and was succeeded by Sir Algernon Sydney, who made great exertions to reduce the records into order. Thomas Astle, the author of the 'History of Writing;' and Samuel Lysons, a topographical writer, who, with his brother the Rev. Daniel Lysons, commenced the 'Magna Britannia,' have been since among the holders of this office.

It is not improbable that the records of the kingdom may have one large building ultimately appropriated to their reception. The Tower is obviously an unfit place for that purpose, as it is now merely a garrison and an arsenal. The attention of the "Record Commission," to whom has been committed the great task of arranging, inspecting, and digesting the records of the kingdom contained in the Tower, Somerset House, &c., has been called to this point. The Board of Ordnance, in reply to a communication from the Record Commission respecting a magazine of gunpowder kept under the collection of records in the White Tower, and the serious loss which would arise if an accident occurred, regret their inability to remove the magazine, and suggest, as a measure of greater propriety, the removal of the records. It would certainly be worthy of the nation if these valuable documents were placed in a suitable depository, and rendered accessible, under proper regulations, to all interested in consulting them.

* * * The Office of the Society for the Diffusion of Useful Knowledge is at 59, Lincoln's Inn Fields.

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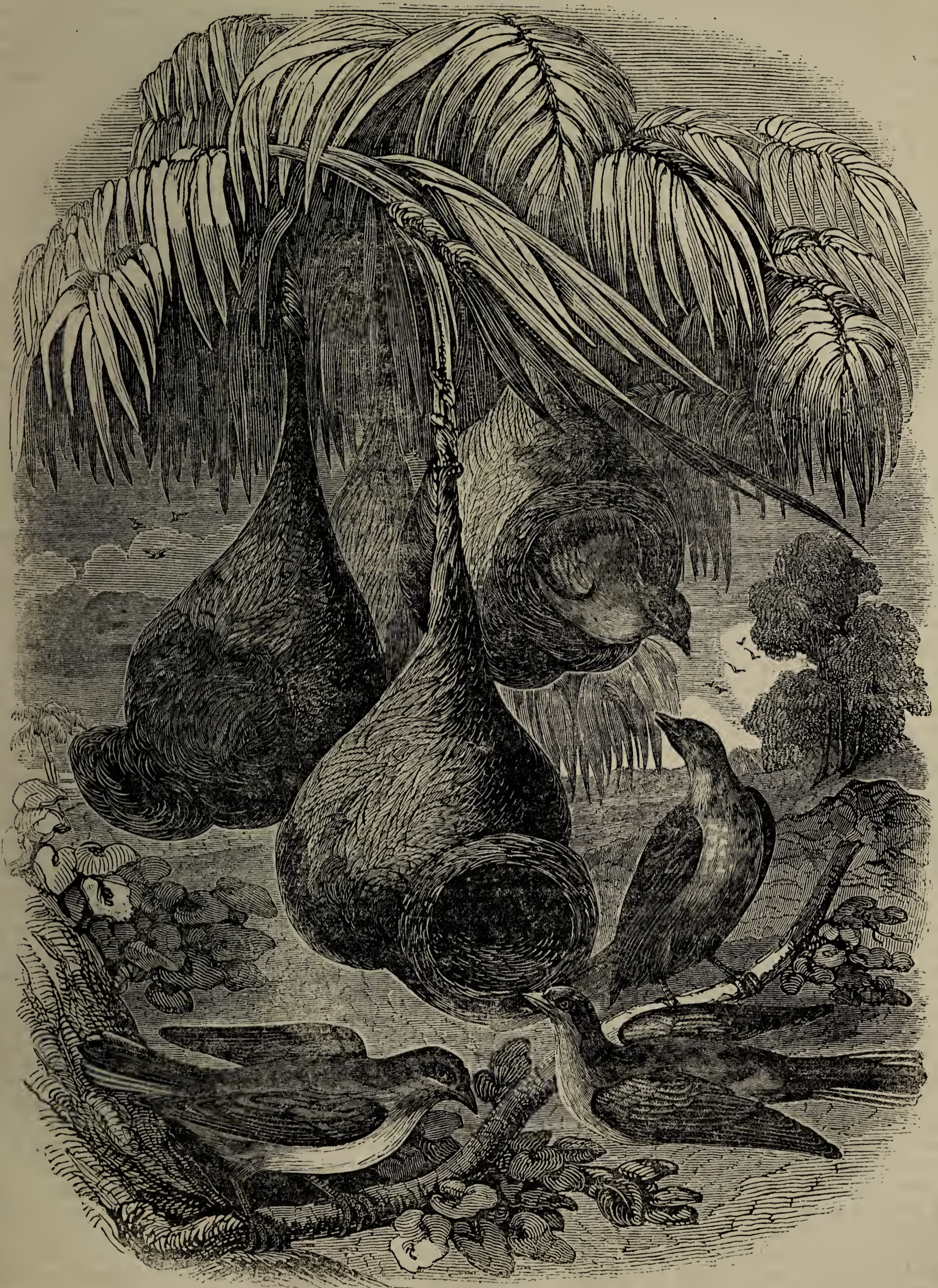
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279.]

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BIRDS' NESTS.



[Pensile Nests of the Oriole.]

IN the volume entitled 'Architecture of Birds,' published by the Society, the subject is divided according to the various modes in which birds manifest their skill as builders. Not fewer than twelve divisions have thus been rendered necessary, each exhibiting architectural conceptions differing in some degree from one another.

The first division includes "mining-birds," such as the sand-martin, which scoops out its nest in the escarpment of a sand-pit or quarry: the burrowing-owl (described in the 'Penny Magazine' No. 93, vol. ii.), the bee-eater, and several others belong to this class. Next come the "ground-builders," which construct a rude nest on the surface, and select a spot possessing a temperature or moisture favourable to the process of incubation. The swallow furnishes the most striking example of the operations of individuals which may appropriately be termed "mason-birds." The thrush, and some others which plaster the inside of their nests with clay, are partially connected with this class. Afterwards come birds which employ their bills as a tool for cutting out or excavating their nests. The practice of the woodpeckers in boring and chiselling a hole in which to shelter the young brood, using means analogous to those which the carpenter employs, obviously suggests the idea of classing them, with some others of similar habits, as "carpenter-birds." Those birds, the natural heat of whose body is very great, and who seldom have more than a couple of eggs each sitting, take little trouble in the construction of their nests. They are of the simplest and rudest form, and consist only of a few sticks loosely laid together. They are termed "platform-builders," this term being really descriptive of their breeding-places. The ring-dove, stock-dove, and pigeons generally, with the golden eagle, the osprey, the heron, the stork and the crane are platform-builders. Among the ruins of Persepolis the stork frequently builds its nest on the top of a perfectly flat column. The birds whose nests resemble basket-work are a large class; and the materials made use of vary from dried twigs, which form the outwork and are without flexibility, to carpenter's shavings, delicate fibrous roots, grass both coarse and fine, and horse-hair. The degree of art with which the "basket-making birds" employ their materials is not less various. Other birds weave the materials of their nests together in the neatest manner: the nests of the hedge-sparrow and wagtail afford the most familiar examples of the art of the "weaver-birds."

The art of the tailor seems more unlikely to be practised by a bird than that of the weaver. There are, however, several varieties included amongst the "tailor-birds." The orchard-starling of the United States forms the external part of its nest of a particular species of long, tough, and flexible grass, "knit or sewed," says Wilson in his 'American Ornithology,' "through and through in a thousand directions, as if actually done with a needle." He relates that an old lady of his acquaintance, to whom he was once showing this curious fabrication, asked him, in a tone between joke and earnest, whether he did not think it possible to learn these birds to darn stockings? The nest of the orchard-starling is hemispherical, three inches deep by four in breadth; the concavity scarcely two inches deep by two in diameter. The enthusiastic ornithologist whom we have quoted says, "I had the curiosity to detach one of the fibres, or stalks, of dried grass from the nest, and found it to measure thirteen inches in length; and in that distance it was thirty-four times hooked through and returned, winding round and round the nest." The tailor-bird of India is described by some naturalists as actually picking up a dead leaf, and forming a nest by sewing it with some fine fibres to the side of a living leaf. Three nests so formed are to be seen in the British Museum. Forbes has described in his 'Oriental Memoirs,' from personal observation, the ingenuity of the tailor-bird. "It first," he says, "selects a plant with large leaves, and then gathers cotton from the shrub, spins it to a thread by means of its long bill and slender feet, and then, as with a needle, sews the leaves neatly together to conceal its nest."

The idea that man learned some of the useful arts from observation of the habits of other animate beings is not true in any extensive sense. Instinct pointed out to the class termed "felt-making birds" the suitability of the materials which they select for weaving or uniting into a continuous mass. The nest of the capocier, an American bird, which was examined by Wilson, is described by him as so "neatly worked and felted together, that it might have been taken for a piece of fine cloth a little worn." Man was long before he employed the same materials in the manufacture of cloth, and it is only by the aid of the microscope that he has been able to discover the cause which adapts them for this purpose, and the true character of their felting properties. The "felt-making birds" availed themselves of these properties from the creation.

The nests of the esculent swallow of Java are an article of commercial importance, the nests themselves being edible, and considered as a luxury and restorative. These nests are supposed to be composed of oceanic vegetables, whose principle being highly gelatinous, and cemented with the salivary gluten of the bird, form a sort of edible paste. Other birds whose nests are tempered by cement produced by a glutinous matter which the bird secretes and mixes with saliva, are, with the Java swallow, classed as "cementers."

The "dome-builders" include several of our most familiar birds—as the magpie, the wren, the sparrow. Lastly come birds which build no nest at all, but deposit their eggs in the nest of some other bird.

That birds are admirable and ingenious artificers cannot be doubted by any one who has attentively examined their workmanship; and as masons, carpenters, weavers, and even tailors, their talents obtain for them advantages similar to those which analogous arts procure for man. But a bird's nest—

Mark it well, within, without!
No tool had he that wrought; no knife to cut,
No nail to fix, no bodkin to insert,
No glue to join: his little beak was all:
And yet how neatly finished! What nice hand,
With every implement and means of art,
Could compass such another?

The cut represents the pensile nests of the Oriole, a native of the United States of America. These birds have been pleasingly described by Wilson, in the 'American Ornithology.' We cannot do better than present the reader with the account given by this ardent ornithologist. We may premise that Alexander Wilson was a poor weaver of Paisley, who emigrated to the United States, and, compelled by an enthusiastic passion and desire to examine the form and manners of every bird which is an inhabitant or sojourner in that country, he taught himself, at the age of forty, to draw and colour after nature, and devoted himself to studies which might enable him to do justice to the subject which he had taken in hand. He travelled for this purpose more than ten thousand miles amid swamps and forests, "a solitary and exploring pilgrim," as he called himself, and though under very great discouragements, he succeeded in bringing out nine volumes in quarto, which are known to every scientific naturalist and intelligent lover of nature in the two hemispheres. The following is abridged from his account of the orioles:—

"Almost the whole genus of orioles belong to America, and, with a few exceptions, build pensile nests. Few of them, however, equal the Baltimore in the construction of these receptacles for their young, and in giving them, in such a superior degree, convenience, warmth, and security. For these purposes he generally fixes on the high bending extremities of the branches, fastening strong strings of hemp or flax round two forked twigs, corresponding to the intended width of the nest; with the same materials, mixed with quan-

tities of loose tow, he interweaves or fabricates a strong or firm kind of cloth, not unlike the substance of a hat in its raw state, forming it into a pouch of six or seven inches in depth, lining it substantially with various soft substances, well interwoven with the outward netting, and, lastly, finishes with a layer of horse-hair; the whole being shaded from the sun and rain by a natural pent-house or canopy of leaves.

“Though birds of the same species have, generally speaking, a common form of building, yet, contrary to the usually received opinion, they do not build exactly in the same manner. As much difference will be found in the style, neatness, and finishing of the nests of the Baltimores, as in their voices. Some appear far superior workmen to others: and probably age may improve them in this as it does in their colours. I have a number of their nests now before me, all completed, and with eggs. One of these, the neatest, is in the form of a cylinder, of five inches diameter, and seven inches in depth, rounded at bottom. The opening at top is narrowed, by a horizontal covering, to two inches and a half in diameter. The materials are flax, hemp, tow, hair, and wool, woven into a complete cloth; the whole tightly sewed through and through with long horse-hairs, several of which measure two feet in length. The bottom is composed of thick tufts of cow hair, sewed also with strong horse-hair. This nest was hung on the extremity of the horizontal branch of an apple-tree, fronting the south-east, was visible a hundred yards off, though shaded from the sun, and was the work of a very beautiful and perfect bird. The eggs are five, white slightly tinged with flesh colour, marked on the greater end with purple dots, and on the other parts with long hair-like lines, intersecting each other in a variety of directions.

“So solicitous is the Baltimore to procure proper materials for his nest, that, in the season of building, the women in the country are under the necessity of narrowly watching their thread that may chance to be out bleaching, and the farmer to secure his young grafts; as the Baltimore, finding the former, and the strings which tie the latter, so well adapted for his purpose, frequently carries off both; or, should the one be over heavy and the other too firmly tied, he will tug at them a considerable time before he gives up the attempt. Skeins of silk and hanks of thread have been often found, after the leaves were fallen, hanging round the Baltimore's nest. Before the introduction of Europeans, no such material could have been obtained here; but, with the sagacity of a good architect, he has improved this circumstance to his advantage.”

The Baltimore bird, or Oriole, is known by a variety of names—such as hang-nest, hanging-bird, golden robin, fire-bird (from the bright orange seen through the green leaves, resembling a flash of fire), &c.; but is most generally called the Baltimore bird, from its colours, which are black and orange, being, says Catesby, those of the arms or livery of Lord Baltimore, formerly the proprietor of Maryland. These birds are several years in receiving their complete plumage. The Baltimore inhabits North America from Canada to Mexico, and is even found so far south as Brazil. Wilson says, “Since the streets of our cities have been planted with that beautiful and stately tree, the Lombardy poplar, these birds are our constant visitors during the early part of summer; and, amid the noise and tumult of coaches, drays, wheelbarrows, and the din of the multitude, they are heard chaunting ‘their native wood-notes wild;’ sometimes, too, within a few yards of an oysterman, who stands bellowing, with the lungs of a Stentor, under the shade of the same tree, so much will habit reconcile even birds to the roar of the city, and to sounds and noises that, in other circumstances, would put a whole grove of them to flight.” The same agree-

able writer describes the note of the Baltimore as “a clear mellow whistle, repeated at short intervals as he gleams among the branches. There is in it a certain wild plaintiveness and *naïveté* extremely interesting;” and he compares it to “the pleasing tranquillity of a careless ploughboy whistling merely for his own amusement.”

The Orchard Oriole, another variety of this species of birds, often attaches its habitation to the long pendent branches of the weeping willow. The nest in this case is formed of the same materials as already described, but is of a slighter texture and much deeper. These branches, being sometimes twelve and even fifteen feet in length, have a large sweep in the wind; and hence the nest is made deeper to prevent the eggs or young from being thrown out.

DEFORMITIES OF THE CHEST.

(Abridged from an Essay by William Coulson, Esq., Consulting Surgeon to the London Lying-in Hospital, &c.)

THE deformities of the chest, owing to their universality, are of vast public interest, and afford an extensive field for pathological investigation; for by whatever cause the natural dimensions of that cavity become altered, whether from mechanical compression, deformities, disease of the spine, or other circumstances, the natural action of the organs contained within it must be more or less deranged, and the health of the individual ultimately affected.

The subject has always been one of great interest, and that interest has increased of late years, owing to the prevalent modes of dress—the pressure of stays, busks, &c., by which some of these deformities are caused or increased.

There are two kinds of deformities of the chest to which we shall more immediately direct attention. In the first, the sides of the chest are flattened, and the *sternum*, or breast-bone, is prominent; in the second, the sternum is depressed or concave in front, and the sides of the chest more convex than natural.

In most cases the subjects of the first kind of deformity are of a weak constitution, and sometimes, as Dupuytren observes, the offspring of unhealthy people, dwelling in low, damp, and cold places, ill clothed, and brought up on unsubstantial food.

The deformity exists sometimes from the birth; at others, however, it occurs during childhood, or later. Indeed, Dr. Copland says that his experience leads him to state that it generally comes on gradually after birth, owing to deficient inflation and development of the lungs, arising from the weakness of the muscles of inspiration, and the flexibility of the ribs at the time of birth; that in cases of this description the vital energy of the lungs is insufficient for their healthy action, and the respiratory mechanism unable to accomplish their full expansion, or sustain the continued pressure of the atmosphere; and that it has appeared to him very frequently to be greatly increased, if not altogether occasioned, subsequently to birth, by the very common practice, among nurses, of lifting the child by pressing the palms of the hand on the sides of the chest, immediately under the armpits. In these views Mr. Coulson is inclined to concur, though not disposed to lay great stress on the incidental cause just mentioned.

In this deformity the sides of the chest are very much flattened, one side being sometimes more depressed than the other; the ribs occasionally appear as if driven inward, or as if pressed from one side to the other; and in some children this compression exists to such an extent, that the two sides of the chest can be grasped with the fingers of one hand.

In consequence of this, the sternum projects, like the breast of a pigeon; whence persons with this deformity

are called pigeon-breasted. The sternum, however, is not always so prominent as it at first sight appears to be, the projection being formed by the sternal extremities of the ribs, and the sternum itself being either flat, or a little concave at its lower, and projecting at its upper part.

When it is considered how very unfavourable this contracted state of the chest is to the proper development and exercise of the organs contained within, it is but natural to expect that their function should be deranged. The extent of this derangement depends in a great measure on the extent of the deformity.

If no attempt be made to remedy the deformity at an age when the bones are in a pliant state, the patient, sooner or later, falls a sacrifice to some disease of the lungs, or heart, produced or excited by the constant functional derangement to which these organs have been subject.

The external appearances of the chest in the second kind of deformity are directly the reverse of those which we have been considering. The sternum is hollow or concave anteriorly, being pressed inwards, either at its middle, at its lower part, or along its whole extent; the sides of the chest are very prominent, and the ribs very much bent; the chest is broad, but depressed anteriorly; the shoulders are high; and the spine is either straight, or but little altered from its natural shape.

Internally, the lungs and heart are, of course, compressed anteriorly; their functions are correspondingly altered, and their structure ultimately suffers.

The constitutional symptoms which attend this kind of deformity are not so severe as those which attend the other. The circulation is hurried, the breathing is generally short and quick, and the patient is frequently subject to cough, or chronic catarrh.

Although, then, the constitutional symptoms be not so severe in this deformity, still it is of the highest importance to attend to the removal of it, as its existence predisposes the patient to pulmonary attacks.

Whatever may be the ultimate cause of these deformities, both local and constitutional means are expedient in the treatment of them.

The constitutional remedies for both deformities are the same. Nutritious diet, regulating the digestive function, and perhaps the artificial salt-water bath, or preferably sea-bathing—in short, we must make use of all means by which the system can be duly kept up.

The local remedies suggested in the Essay are, various exercises adapted to strengthen the muscles which extend from the arms and shoulders to the chest, &c. These, however, must be judiciously directed and employed.

FRIBOURG SUSPENSION BRIDGE.

It is chiefly within the last thirty years that bridges have been constructed by suspending them on iron chains, or on rods linked together, so as to form a curve between two elevated extremities. A rope stretched across a river whose deep or rocky bed did not admit of a boat, and which could not be forded, has been the means of communication between the opposite banks in almost every mountainous country. And where materials sufficiently strong and durable could be procured to bear the weight of men and cattle, suspension bridges, on the same principle as those lately constructed, have been met with by travellers both in the Old and New World. In the interior of India and Thibet travellers have found iron suspension bridges, said to be of great antiquity, much resembling our own. In one place, the chains, which support a bridge of bamboo, are raised over stone piers, with openings

in them for the road to pass through*. In another, the whole is constructed of twisted slips of bamboo, forming strong and durable cables, over which the road passes. Several such bridges are reported to exist in the mountainous part of Chinese Tartary.

In the magnificent mountains of South America there are bridges formed of strips of ox-hide, (a material which is readily procured in the plains from the immense herds of wild cattle which breed there,) or of the stems of creeping plants twisted into a rope. Sometimes a single rope forms the only means of traversing rivers. A basket suspended from a ring, or strong loop, through which the rope passes, is drawn along by means of smaller ropes, which reach to the opposite bank; and the traveller, seated in the basket, is ferried safely over torrents and ravines, which otherwise would be absolutely impassable. In other places a narrow board laid on ropes forms an unsteady bridge, which can only be ventured on by a practised mountain-traveller, whose head is accustomed to precipices, and whose feet can tread safely on an unstable support, which trembles under him.

But without going so far from our own shores, those who have explored the natural wonders of the north-west coast of Ireland, and the Giant's Causeway, will probably have seen the hanging bridge at Carric-a-rede, near Ballintoy, which is the simplest form of suspension bridges. It is formed by stretching two cables from the cliff to a rock which, at some time or other, has been separated from it by some convulsion of Nature. This rock stands like a pillar in the sea; and a chasm sixty feet wide, through which the sea rages furiously with the least swell of the waves, separates it from the rocky coast, from which it seems to have been torn. The cables are fixed to hooks firmly secured in the rock on one side, and on the other are kept properly stretched by means of a tackle and pulleys. The two cables are connected at intervals by ropes tied across them, which form a kind of ladder, like the shrouds in a ship. Boards are laid lengthways on these, and fastened down to form the bridge. These boards are not above eighteen inches wide; and there is no other protection than a rope stretched parallel to the bridge, at about three feet above one side of it, connected with the bridge at regular intervals, and forming a very insecure hand-rail. The length of the bridge is sixty feet, the height above the sea eighty. Over this swinging bridge the inhabitants—men, women, and children—pass and re-pass, as they would over a plank laid across a common ditch. Sheep are sometimes carried over it on men's backs, to eat the scanty herbage on the rock. The repairs of the bridge occasion considerable expense. It is removed every winter, and replaced in spring. The cables often require to be renewed; but the advantage to the fishermen is so great, that they never consider the cost. It has been in use longer than the present generation can remember. The same account of it was given to the writer of this in 1800, when he first visited it. This bridge may be considered as having existed before any of the modern suspension bridges in England, and may, amongst other circumstances, have contributed to give an idea of the extensive bridges erected since. The first bridge made in imitation of the Carric-a-rede bridge, as far as we know, was in the grounds of a lady in the county of Antrim, over a very picturesque waterfall in a rocky glen. The materials were rope, but they were formed into a much safer and more elegant bridge than the one at Carric-a-rede. The parapet was made of ropes, in the form of a strong net-work, and raised over high posts on each side, very similar to the piers now in use. It was in fact a very

* This bridge is called *chuka chasum*, and mentioned by Capt. Turner in his account of his travels in Thibet, 1783.



[Fribourg Suspension Bridge.]

good model of a suspension bridge, long before any more important structure of this kind was generally known.

In the United States of America several suspension bridges were constructed about forty years ago. One of these, over the Merrimack, at Newbury Point, has a span of 244 feet. About the same time a bridge suspended by wires was made over the Tweed, near Dryburgh Abbey, the seat of Lord Buchan, in Roxburghshire. The road on this bridge was supported by wires, stretched from different points of it to supports on each side. The span was 240 feet; but it was not made sufficiently strong to withstand the violent storms which occasionally sweep the course of the river; and it was destroyed in six months after its completion.

Some years after this, suspension bridges began again to occupy the attention of scientific men. Captain Brown of the Royal Navy first thought of using rods of iron, connected so as to form long flexible chains, instead of the iron chains with small links, which had come into use in the Navy, and which, from their strength and durability, seemed well adapted to form suspension bridges. He invented a strong and ingenious method of connecting the rods without diminishing their flexibility at the joints, for which he took out a patent.

He superintended the construction of several bridges; one of the first of these was the Union Bridge across the Tweed, five miles above Berwick. The span of this bridge is about 450 feet. It has stood well, and appears fully equal to support any weight which can fairly be brought upon it. It was completed in 1820.

He next built a pier at Newhaven, near Leith, to enable the passengers by steam-boats to land at all times of the tide. It projects 700 feet into the sea, and is formed in three spans. It is intended only for foot

passengers, and consequently is of a light construction. The first pier on the land side is of strong masonry; the other three are frames of cast-iron, supported on piles driven into the sand. A platform at the end, sixty feet by fifty, rests on a strong frame-work of beams and piles; and is loaded to give the necessary support to the ends of the chains, where the great strain lies. It has answered the purpose well.

The elegant pier of Brighton is the work of the same engineer, and the plan of it is very similar. It consists of four bridges, or spans, each 255 feet long, and boldly projects into the sea at right angles to the cliff. The chains are secured on the land side by strong masonry. They pass over light pyramidal frames of cast iron, with a clear passage through them, which rest on piles well framed together, and they are fixed at the further end to a platform constructed like that at Newhaven, which forms a T with the bridge, being eighty feet across, and forty feet in the line of the bridge. A pavement of blocks of granite a foot thick and weighing altogether 200 tons, gives steadiness to this end. It was completed in a little more than a year, and is a great ornament to the town of Brighton. Its use for the landing of goods and passengers has not proved so great as was anticipated; and it suffered considerable damage in a storm on Oct. 15, 1833 (see 'Penny Magazine,' No. 105). But it is an agreeable promenade and much frequented. Although the original speculators are disappointed of their expected profit, it is a great advantage to the inhabitants, and the money collected at the entrance, from those who walk upon it for pleasure, is sufficient to keep it in repair.

The greatest undertaking of this kind was that of Mr. Telford, who planned a bridge across the straits of Menai, which separate the Island of Anglesea from the

coast of Caernarvon. This threw every preceding project into the shade. The distance to be crossed from shore to shore was nearly a quarter of a mile. There was a rock at some distance from one side, on which a pier might be erected; on the other side nothing appeared above the water. He determined to erect a pier at the same distance from the opposite shore, and to throw a suspension bridge from one pier to the other, the distance being 550 feet. He connected these piers with the shores next to them by stone arches; but the chains of the suspension bridge are carried on to each shore, where they are fixed in the rock in a very secure manner. A description of this bridge, with a cut, are given in the No. 167 of the 'Penny Magazine.' When this bridge was completed in 1826, it was justly considered as one of the boldest attempts ever made by any architect or civil engineer, and drew crowds of travellers, not only from all parts of the kingdom, but from many foreign countries, the principal object of whose journey was to view the Menai Bridge, as one of the modern wonders of the world. It divided the attention of the curious with the Thames Tunnel, which at one time was the great object of interest and curiosity all over the continent of Europe.

The Menai Bridge has, however, been much surpassed in distance between the piers, and lightness of construction, by the wire suspension bridge lately erected at Fribourg in Switzerland, of which we will now give a short but particular description.

This bridge has a span from pier to pier of 870 feet, and is suspended at the height of 167 feet above the river which flows under it. It is thus 319 feet longer than the Menai bridge, and 65 feet higher. Its great height and almost airy lightness, and the picturesque scenery around it, add greatly to the wonder which it excites in the beholder. To give a general idea of it, with the help of a very accurate representation in the annexed cut, we must first draw the attention of those who have never visited this highly interesting spot, to the situation of the city of Fribourg.

The small but rapid river, the Sarine, descends from the Fribourg Alps; and after winding along a very beautiful and romantic valley (in the midst of the mountains) to which it gives its name, and traversing the Gruyère country, it flows past the city of Fribourg, and falls into the Aar a little above Aarberg. It turns at a right angle round the base of the rock on which Fribourg is built. The ground here descends towards the river to the south of it, with a very steep slope, and is quite perpendicular on the north-east. The principal part of the town with the cathedral is built along the precipitous side, which rises from 200 to 300 feet above the bed of the river. The width of the valley on this side, at the height of 200 feet, is not above 300 yards; and here the bridge is suspended. The hill on the north-east side of the river rises to a considerable height.

Fribourg had always been an interesting object to travellers, but its situation and the great difficulty of the approach, frequently deterred the timid from visiting it. Since the bridge has been opened, the course is immense, and all those who have seen it will allow that, far from exaggerating, we cannot convey an adequate idea of the effect produced by the appearance of the bridge when seen in the morning or evening of a fine summer's day. If you stand in the valley at the place where the river forms a considerable angle, and look in a northern direction along the course of the stream, which is the view given in the cut, you have the magnificent Fribourg Alps behind you. On the left you look up the valley of the Sarine, towards the mountains situated at the bottom of the lake of Geneva, with the points of the higher alps overtopping them, clad with eternal snow. Before you is the view

down the valley, with the suspension bridge across it, as is represented in the cut. The hills receding in the background towards the Jura, finish the splendid panorama.

[To be continued.]

ANCIENT BOOKS.

(From the 'Pictorial Bible.')

IN order to give the reader some idea of the probable form and material of this most ancient book, (see Deuteronomy, chap. xxxi. v. 24) and the other books mentioned in the sacred volume, we shall here state a few leading facts on the general subject. It will be observed that our present notice is limited to such portable writings as may more or less properly come under the denomination of "book." As we shall not enlarge the subject by investigating the chronological priority in the use of the different substances employed, we shall find it convenient to arrange our brief remarks under the heads of Vegetable, Metallic, and Animal Substances. Most of those we shall notice, or probably all, were, in due order of time, known to the Jews, as we either know positively from Scripture, or else may, with tolerable certainty, infer from their connections with other nations. It may be therefore more useful to view the subject connectedly, than to take it up in fragments, as the several passages bring the details under our notice.

I. VEGETABLE SUBSTANCES.

1. *Wood.*—Inscriptions on wood are very ancient, but do not require to be here noticed. Tablets of wood were very early in use, and seem to have been generally employed much in the same way as slates among ourselves; that is, for temporary writing. Sometimes they were single, but frequently from two to five or more leaves were done up into a sort of book, something like our slate-books. The Greeks and Romans usually coated the boards with wax, on which the letters were traced with a *style*, or pen, commonly of iron, but also of gold, silver, brass, and sometimes ivory or bone. These instruments had one end pointed, to trace the letters, and the other broad and smooth, for the purpose of obliterating what had been written, by spreading back the wax, so as to render it fit to receive other words. In such books there was in the middle of each leaf a sort of button, to prevent the pages from touching each other when closed. But the greater warmth of their climate prevented the Jews from generally using wax: they therefore wrote on the tablets with a kind of ink, which could be easily sponged out when necessary. Such tablets of wood were in use long before the time of Homer, who lived 150 years before Isaiah; and Horne thinks it highly probable that several of the prophets wrote upon tablets of wood, or some similar material. (Compare Isa. xxx. 8, and Hab. ii. 2.) Such certainly was the "writing-table" on which Zecharias wrote the name of his son, John the Baptist. (Luke i. 63.) They were not wholly disused in Europe until the fourteenth century; and are still employed in North Africa, Western Asia, and Greece. The leaves of these tablet-books, whether of wood, metal, or ivory, were connected together by rings at the back, through which a rod was passed, that served as a handle to carry them by.

2. *Bark of trees.*—The fine inner bark of such trees as the lime, ash, maple, or elm, was early used as a substance for writing. As such was called in Latin *liber*, this name came permanently to be applied to all kinds of books, and has, in a similar connection, been adopted into most European languages. These books, like all others of flexible materials, were rolled up to

render them portable and to preserve the writing. They were usually rolled round a stick or cylinder; and if they were long, round two cylinders. Hence the name *volume* (volumen)—a thing rolled up—which continues to be applied to books very different from rolls. In using the roll, the reader unrolled it to the place he wanted, and rolled it up again when he had read it. The book of the law, written on parchment, is thus rolled and thus read in the Jewish synagogues at the present time. We do not know that rolls of bark are mentioned in the Scripture, but it does not therefore follow that they were not known to the Jews.

3. *Leaves of trees.*—Pliny thinks that the most early substance for writing was the leaf of the palm-tree; meaning, we presume, the first flexible substance. Be this as it may, the process is certainly of very remote antiquity; and would be naturally suggested by its being perceived how readily particular leaves received and retained marks made by a pointed instrument. At this day, books made with the leaves of different trees are common among the Indian nations, and specimens of them are numerous in England. The palmyra leaf is that which is most generally used; but others are preferred in some parts, as those of the talipot-tree, in Ceylon, on account of its superior breadth and thickness. The letters are written, or rather engraved, with a fine-pointed style, or sort of bodkin; and the writing is afterwards rubbed over with a composition of oil and pulverized charcoal, which renders the characters distinct and permanent.

4. *Papyrus.*—This was a vegetable tissue, the manufacture of which originated and was, in a great degree, peculiar to Egypt. It is obtained from a bulrush (*Cyperus papyrus*, Linn.) which grew in the swamps of the Nile to the height of ten or fifteen feet. The parts used in making the papyrus were the thin concentric coats or pellicles that surround the triangular stalk; those nearest the centre being the best and finest. A layer of these was laid out lengthwise on a board, and another layer pasted over it crosswise; and after being pressed and dried in the sun, the sheet was completed by the surface being polished with a shell, or other hard and smooth substance. A number of these sheets were glued together, to form a roll of the required dimensions. The breadth was determined by the length of the slips taken from the plant; but the length might of course be carried to almost any extent. The largest that has yet been found is thirty feet long. The writing, *as in all rolls of whatever material*, is not across the length or breadth of the roll, but in columns, extended in the direction of the roll's breadth, with a blank strip between them. Many such rolls have been found in Egypt, in mummy-cases and earthen vessels, and many also in the houses excavated at Herculaneum. The former, though more ancient, are better preserved and more easily unrolled than the latter, which have suffered from the action of heat. The superiority of the papyrus to all other materials previously known, brought it speedily into general use, for books, among the western civilized nations; and it must, in the time of the Apocrypha and New Testament, have been well known to the Jews. Indeed it may probably enough have been known to the prophets; for although the common account makes the discovery posterior to the foundation of Alexandria, this must be an error; since it was extensively used and formed an article of export from Egypt in the time of Herodotus, whose visit to that country was more than a century prior to the foundation of Alexandria. The rush itself is distinctly mentioned by Isaiah (xix. 7) in predicting the confusion of Egypt. Our wood-cut exhibits an Egyptian roll, and others at Herculaneum, in various illustrative circumstances—some unrolled, some closed,

and others in the boxes in which they were usually kept, several together, deposited vertically, and ticketed at the upper extremity with their titles. (See more largely in 'Egyptian Antiquities,' vol. ii. chap. 7; and 'Pompeii,' vol. ii., chap. 13, in 'Library of Entertaining Knowledge.')

5. *Linen.*—The use of linen, as a substance for writing on, is allowed to have been long prior to the invention of papyrus. Indeed, it is evident that when men had invented linen cloth for dress, and afterwards began to feel the need of a flexible and durable material for writing, it would naturally occur to them, that, if their linen could be so prepared as to receive and retain the characters, it would be more convenient to form a portable book than any substance previously known. They soon found how to adapt their tissues to this purpose by priming or painting them all over, before they began to write, the writing itself being also rather painted than written, for the inks of antiquity were rather paints than inks, containing no mordant to give them durability; resembling, in this, the inks now used in the East. That such writing was known to the ancient Egyptians, we know from the written bandages which are sometimes found on mummies. Linen books are mentioned by Pliny and Vopiscus; and Livy speaks of such books that were found in the temple of Moneta. The obvious character of the resource is also indicated by the fact, that the pictorial epistles of the Mexicans were painted on a cotton tissue. The use of linen was certainly known to the Jews in the time of Moses, the priestly robes being principally of that material; and there are Biblical scholars who think that the original of the Pentateuch and the other books of the Old Testament were written on rolls of linen. The question is certainly open to investigation, as *rolls* only are mentioned in a general sense, without our being informed of what they were composed. Our own impression certainly is, that when a "roll" (מגילה, *megillah*) or "book" (ספר, *sepher*) is mentioned, we are to understand that it was either of linen, or of the skins of animals—sometimes, perhaps, the one, and sometimes the other.

II. METALLIC SUBSTANCES.

Tablets, and sometimes several tablets formed into a book, like the wooden tablets, consisting of plates of lead, copper, brass, and other metals, were anciently used, either to form leaves on which the wax might be spread, or else for the writing to be engraven upon them. The latter process is exceedingly ancient. Writing on lead is mentioned by Job (xix. 24). Pliny mentions that leaden sheets or plates were used for important public documents. This we learn also from other sources; and brass was also employed for inscriptions intended to be very durable. What Pliny says on the general subject is instructive. "At first men wrote on the leaves of the palm, and the bark of certain other trees; but afterwards public documents were preserved on leaden plates or sheets, and those of a private nature on wax and linen." The order of sequence here is of no weight; we cite it for the facts. Montfaucon purchased at Rome, in 1699, an ancient book entirely composed of lead. It was about four inches long and three inches wide; and not only were the two pieces that formed the cover, and the leaves, six in number, of lead, but also the stick inserted through the rings to hold the leaves together, as well as the hinges and nails. It contained Egyptian Gnostic figures and unintelligible writing. Brass, as more durable, was used for the inscriptions designed to last the longest, such as treaties, laws, and alliances. These public documents were, however, usually written on large tablets. The style, for writing on brass and other hard substances, was sometimes tipped with diamond (Jerem. xvii. 1).

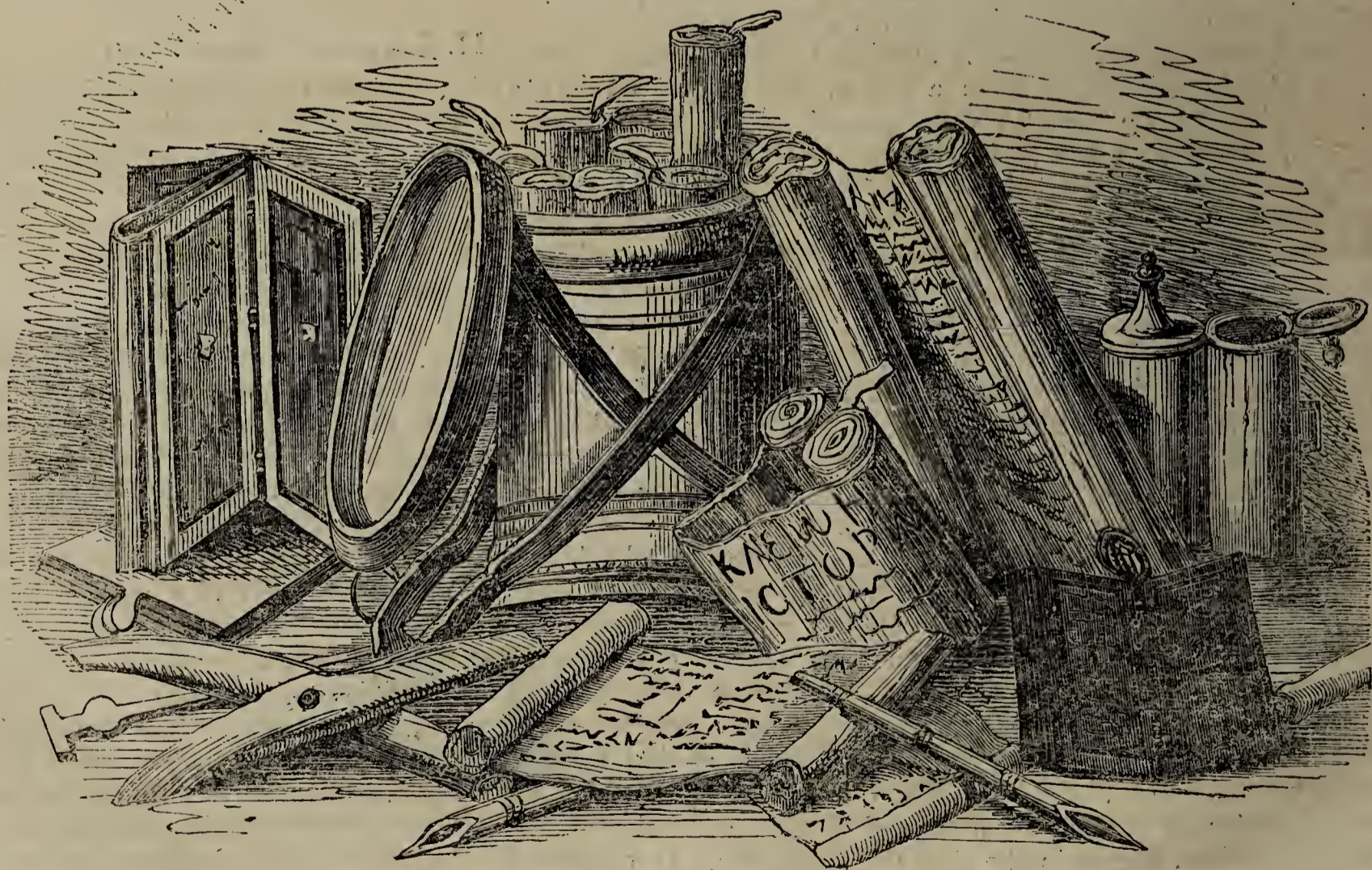
III. ANIMAL SUBSTANCES.

1. *Skins*.—The skins of animals were in use for writing long before parchment was invented. Herodotus mentions the barbarians as writing or painting on the skins of goats and sheep; and Diodorus describes the ancient Persian records as being kept on the same substance. The recourse was so very obvious that it has prevailed in most countries. Even in America, the Mexicans had books of skins, and the North American Indians had maps painted on skins. It was also certainly one of the most ancient, if not the most ancient, form of portable writing; and they have great probability on their side who contend that the books of Moses were written on the skins of sheep or goats. The Jews, then, had most certainly the art of preparing and dyeing skins, for rams' skins dyed red, made a part of the covering for the tabernacle. In connection with this fact, the following particulars of a Hebrew MS. roll of the Pentateuch, now in the public library at Cambridge, are very instructive. The roll was discovered by Dr. Claudius Buchanan, in the record-chest of the black Jews in Malabar, supposed to be descended from the first dispersion of the Hebrew nation by Nebuchadnezzar. The date of the manuscript could not be ascertained, but the text is supposed to have been derived from those copies which their ancestors brought with them to India. It is written on a roll of goats' skins, dyed red, and measures forty-eight feet in length, by twenty-two inches in breadth. As it wants Leviticus and the greater part of Deuteronomy, it is calculated that its original length must have been not less than ninety English feet. In its present condition it consists of thirty-seven skins, comprehending 170 columns, four inches in breadth, and containing each from forty to fifty lines. It is in some places worn out, and the holes have been sewn up with pieces of parchment. (See further particulars in Horne's account of Hebrew Manuscripts in his 'Introduction,' vol. iv. p. 86—89.) We refer to this remarkable roll merely as representing a very primitive manner of writing important documents,

without expressing any opinion as to the date of the roll or the value of its text. Dr. Buchanan himself states, in his 'Researches' (p. 236, ninth edit.), that "the Cabul Jews, who travel into the interior of China, say, that in some synagogues the law is still written on a roll of leather, made of goats' skins, dyed red; not on vellum, but on a soft flexible leather."

2. *Parchment*.—This is but an improvement, although a very important one, on the process just mentioned. It was one of the latest, if not the latest, of the various processes we have noticed; although some assign it a very early date, for want of adverting to the difference between it and *skins* less artificially prepared. The improvement is said to have been invented at Pergamos, at a time when Ptolemy Philadelphus prohibited the exportation of papyrus from Egypt, with the view of obstructing the formation of a grand library which Eumenes, king of Pergamos, was forming, and which he feared might eclipse his own great library at Alexandria. It is certain that the best parchment was made at Pergamos, and skins thus prepared were hence called *Charta Pergamena*, of which our *parchment* is a corruption. In Greek they are sometimes called *membrana* (μεμβρανα), under which name St. Paul mentions them in 1 Tim. iv. 13. Parchment came to be employed for legal, sacred, and other particular classes of works; but the comparative cheapness of papyrus, combined with as much durability as could be required for the more common literary works, maintained it still in general use. The Jews soon began to write their scriptures on parchment, of which the rolls of the law used in their synagogues are still composed.

3. *Ivory*.—Tablets and tablet-books of ivory, on the same principle as those of wood and metals, were anciently in use, much as they continue to be so among ourselves. They were written on with that paint-like ink which, as we have already noticed, might be washed off when necessary. The Burmese have beautiful books formed of ivory sheets, stained black, on which the characters are gilt or enamelled, and the margins adorned with gilding.



[Writing Materials and Implements.]

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EASBY ABBEY, YORKSHIRE.



[Easby Abbey, near Richmond, Yorkshire.]

ABOUT two miles from the picturesquely-situated town of Richmond, in Yorkshire, is the village of Easby, and near it the remains of Easby Abbey, which was dedicated to St. Agatha. It is a very interesting ruin, and the effect is much heightened by the surrounding scenery, and the River Swale, on the banks of which it is situated. In Dugdale's 'Monasticon' it is stated to have been founded by Roald, Constable of Richmond Castle, about the year 1152. The manor on which the abbey stands was sold, in the reign of Edward III., to the Scopes, lords of Bolton, who, from their attention to the interests of this religious house, and the revenues with which they endowed it, came to be considered as the founders. In the 16th Richard II., says Dugdale, "Richard le Scope, of Bolton, meditated a magnificent donation to this house, for which he obtained a license in that year. This was no less than a rent charge of 150*l.* sterling upon the manors of Brig-nale, Caldwell, Clyff-upon-Teese, Thornton, Seward, Middleton, Quernow, &c., for the support of ten additional canons and two secular chaplains, to pray for the good estate of the founder and his heirs while living,

and for their souls when deceased, as well as those of their ancestors. To this was added a condition, that the abbey and convent should also sustain twenty-two poor persons within the abbey for the good of the same souls. Thirteen years before, the same patron had already bestowed upon this house the manor of Brompton-upon-Swale, then valued at 10*l.* 3*s.* 4*d.* per annum."

The abbey of St. Agatha at Easby was founded for what were termed Premonstratensian canons. The Premonstratensians were canons who lived according to the rule of St. Austen, as reformed by St. Norbert, afterwards Bishop of Magdeburgh, who established the society, about the year 1120, at Premonstratum, in the diocese of Laon, in Picardy. The Premonstratensians were also called White Canons, from their habit, which was a white cassock, with a white rochet over it, a long white cloak, and white cap. They were brought into England shortly after the year 1140, and settled first at Newhouse, in Lincolnshire. Easby Abbey, therefore, must have been founded about ten years after the arrival of the order in this country. They had in Eng-land a conservator of their privileges, but were often

visited by their superiors at Premonstre; and they continued under the jurisdiction of the abbot of Premonstre and the general chapter of the order till the year 1512, when they were exempted from it by the bull of Pope Julius II., which was confirmed by Henry VIII.; and the superiority of all the houses of this order in England and Wales was given to the abbot of Welbeck, in Nottinghamshire. Tanner reckoned about thirty-five Premonstratensian houses in England*.

There does not appear to be anything very remarkable in the history of Easby Abbey, or rather, to use the correct denomination, the abbey of St. Agatha at Easby. In the 26th Henry VIII. the total of the revenues of the house amounted to 188*l.* 16*s.* 2*d.* per annum: the clear income was 111*l.* 17*s.* 11*d.* The site was granted, in the 4th and 5th of Philip and Mary, to Ralph Gower, and in the 14th Elizabeth, to John Stanhope.

“By the landscape-painter and the man of taste, the ruins of this house, combined with the scene around them, have never been contemplated without delight. But admiration and rapture are very unobserving qualities; and it has never hitherto been attended to, that this house, though its several parts are elaborate and ornamental, has been planned with a neglect of symmetry and proportion which might have become an architect of Laputa. Of the refectory, a noble room, nearly one hundred feet long, with a groined apartment below, every angle is either greater or less than a right angle. Of the cloister-court, contrary to every other example, there have been only two entire sides, each of which has an obtuse angle. From these again the entire outline of the church reels to the west, and though the chapter-house is a rectangle, the vestry is a trapezium†. Once more: of the terminations of the north and south aisles eastward, one has extended several yards beyond the other: the choir also is elongated, out of all proportion. The abbot's lodgings, instead of occupying their usual situation, to the south-east of the choir, and of being connected with the east end of the cloister-court, are here most injudiciously placed to the north of the church, and therefore deprived, by the great elevation of the latter, of warmth and sunshine. The abbot's private entrance into the church was by a doorway, yet remaining, into the north aisle of the nave. To compensate, however, for the darkness of his lodgings, he had a pleasant garden, open to the morning sun, with a beautiful solarium‡, highly adorned with Gothic groinings at the north-east angle.

“But to atone for all these deformities in architecture, many of the decorations of this house are extremely elegant. Among these the first place is due to the great window of the refectory, of which the beauties are better described by the pencil than the pen. This, with the groined vault beneath, appears to be of the reign of Henry III. North-west from this are several fine apartments, contemporary, as appears, with the foundation; but the whole line of wall, having been placed on the shelving bank of the Swale, has long been gradually detaching itself from the adjoining parts, and threatens in no long period to destroy one of the best features of the place. On the best side of the imperfect cloister-court is a circular doorway, which displays the fantastic taste of Norman enrichments in perfection. A cluster of round columns, with variously-adorned capitals, is surmounted by a double

* See Dugdale's 'Monasticon.'

† Trapezium, a figure where the four sides are neither equal nor parallel.

‡ Solarium, as the name implies, signifies a place exposed to the sun, and was applied originally to places on the tops of houses, where the Romans used to take air and exercise. In the present instance it means simply a garden or summer-house.

moulded arch, embossed with cats' heads hanging out their tongues, which are curled at the extremities. Above all is an elegant moulding of foliage. Not far beneath is a large picturesque tree, (perhaps truly) distinguished by the name of the Abbot's elm. The abbey gateway, still in perfect repair, is the latest part of the whole fabric, and probably about the era of Edward III.*”

This gateway has circular arches, which appear beneath the pointed ones; and some antiquaries, puzzled by this combination, have conjectured that the circular arches were introduced at a late period, to sustain some real or imagined weakness in the original structure. But Dr. Whitaker contends that the masonry of the two orders is so indissolubly tied together as to render this hypothesis untenable. He therefore supposes that the combination is nothing more than one of those deviations from all order—“one of those experiments on the effects to be produced by uniting the style of different ages, in which the architects of those days, though with far less boldness than those of our own, not unfrequently indulged themselves.”

A BRIEF CAPTIVITY AMONGST THE CHINESE.

VARIOUS papers have appeared in the 'Penny Magazine,' having for their object the gratification of the rapidly-increasing interest and curiosity with which China is regarded. That vast empire, in spite of the hereditary and official jealousy with which foreigners are treated, and the system of exclusion which is maintained, is beginning to be gradually disclosed to us. Of late years a considerable addition to our stock of information respecting the social condition, manners, and customs of the Chinese has been gathered. We have still, however, many prejudices and errors respecting both country and people to be overcome. A foreigner who had merely sailed up the Thames, and lived exclusively in one of the narrow streets or lanes which skirt the docks or wharfs of London, would have infinitely better pretensions to describe the English character than some travellers have to describe the Chinese, because they have visited the factory at Canton. “The Chinese,” says Mr. Davis, “have, upon the whole, been under-estimated, or rather unfairly despised, on the score of their moral attributes. The reason of this has probably been, the extremely unfavourable aspect in which they have appeared to the generality of observers at Canton; just as if any one should attempt to form an estimate of our national character in England from that peculiar phase under which it may present itself at some commercial seaport.”

With these remarks we wish to introduce some extracts from a MS. journal of Mr. C. A. Hudson, who was second officer of the Argyle, on its voyage from Bengal to Canton, and who endured a kind of captivity amongst the Chinese for nearly a month, namely, from January 20 to February 18, 1835. The author does not tell his story very distinctly in the outset; it will be necessary therefore to inform the reader that the Argyle was crossing from Luzon or Luconia, (sometimes called Manilla, from its capital) the largest of the Philippine islands, to the Ladrões, which lie off the south coast of China, near the mouth of the arm of the sea, or estuary, which leads up to Canton. The journal thus commences:—

“At seven A.M. I left the ship in the first cutter to go on shore for a pilot, as our chronometer had stopped, and we did not know exactly where we were, but supposed ourselves to be some distance to leeward, in

* Dr Whitaker's 'Yorkshire,' vol. i., p. 113.

† 'The Chinese,' by J. F. Davis, Esq.

consequence of having experienced a heavy gale from the north-east in crossing from Luconia to the Ladrones. My boat's crew consisted of two pilots (one an Englishman, the other a Manilla man), nine lascars, and myself.

"On landing, I went up to a hut, about a mile distant, with a pilot and one lascar, but I found no one that could understand us. On returning to the boat, I saw about thirty or forty Chinamen running away with the masts, sails, and other things belonging to her, and found that they had stolen everything she contained, a few of the oars excepted. The tide having ebbed had left the boat nearly dry. We attempted to launch her, but found that she was stove, either by the heavy rolling of the sea, or, as I have more reason to conclude, by the Chinese, whom we had before seen making off; for the lascars who had been left in her were totally incapable of preventing them from doing whatever they pleased, as we had not taken the precaution of bringing arms with us. A number of persons now came round us, and we walked up to a point nearly abreast the ship, and endeavoured to make a signal to her by waving one of the lascar's turbans; but, from their not sending a boat, I supposed they did not see it. A greater number of Chinamen here surrounded us, amounting, I should think, to about 150, and robbed us of everything we had, even to a part of our clothes. We now went on the rocks, close to the water's edge, when, having taken off my shirt, I again tried to make a signal, thinking that, as it was white, and the ship not being above two miles from the shore, they might probably see it. We remained on the rocks till sunset, but no boat came. A man, respectably dressed, had been waving to us for some time from the top of the point. Thinking that he might not be so bad as the rest, and despairing of any one seeing our signal that night, we went up to him; he appeared very friendly, and beckoned to us to follow him; this, at first, I did not like to do; but so many being about us, armed with a sort of bill-hook, similar to those used by hedgers in England, I was fearful of giving offence by refusing, and did as he directed, telling the men to do the same.

"The person whom we followed took us about two miles from the beach, where we found a pretty considerable village, upon entering which the inhabitants flocked about us to such a degree, that it was with great difficulty we could get along. Our conductor seemed to be the principal person in the village. He treated us very well, and gave us water to wash ourselves, though we had been pretty well soaked with salt water before; but it was followed by some rice and sweet potatoes, of which all the men seemed to make a hearty meal. I was prevented from doing the same, being very feverish, and having a severe headache, so that I was glad when he offered us a place with some straw to lie down on."

No explanation is offered in the journal of the somewhat strange circumstance that a second boat was not dispatched in quest of the first. The captain would not surely suppose himself lying off a coast where the inhabitants, as in New Zealand, were fierce and daring cannibals ready to devour their prisoners. In point of fact neither the officer nor his crew were "taken prisoners," as he terms it. "The southern shores of China," says Mr. Davis, "from the innumerable islands with which they are studded, have always given employment to a hardy race of fishermen, whose poverty, joined to their independent habits, have at different periods led them to combine in large bodies for piratical purposes." This may help to account for the thieving propensities of the lower class of the inhabitants of the coast who robbed the officer and his crew, without fastening on the entire people of China

the epithet of "Ladrones," (*i. e.* thieves, robbers,) which Magellan bestowed on the neighbouring islands, on account of the propensity which the inhabitants manifested to carry off whatever they saw. But to return to the journal.

"The Chinaman who had been so kind asked us to go up to his house, making signs that he would give us something to eat. We followed him, and I believe that whilst we were walking up, twelve men might have taken every village within six miles of us, as they must have been all deserted. We were completely surrounded by men, women, and children, feeling our clothes and pulling off our caps. However, we arrived safe at the house, which was one of the best in the village, they being in general from fifteen to twenty feet in height; the first four feet built of stone, and the upper part of a small and well-formed red brick, with a tiled roofing. The interior of this as well as the other houses I saw at this place was divided into two parts; one appropriated for the use of the women and the other for the men, the females never entering the apartments of the males (the servants, who, I believe, were commonly slave girls, but natives of the country, excepted). The place allotted to us was a kind of out-house, or shed, where all the agricultural implements were kept. We had here a hearty meal of rice and sweet potatoes, and had also a liquor given us, extracted from rice, and called in China 'chow,' not very palatable; after this we drank our tea, smoked our pipes, and went to sleep.

"After a good night's rest, though rather cold lodging, I went at seven in the morning to the top of the nearest hill, to see if we could discern anything of the ship, but in vain. We went back again and found a pretty good breakfast; after which the man of the house brought me a spy-glass, which he did not appear to know the use of, as he looked through the wrong end. I made him understand that I wanted to make use of it for a short time, and he complied with my request. I now went to the top of one of the hills, and saw several villages in different valleys: a short time after my return a man came and reported a ship in sight. On going to the side of the hill I saw a ship standing out from under a point to leeward of the bay. I knew her to be the Argyle, she having drifted with the tide during the last twenty-four hours; and I went down to the beach and hoisted our signal, the ship still standing off. We remained there till sunset, but to no purpose. On walking up to the house we were followed by a vast concourse of people, whose curiosity appeared to be much excited by our colour, dress, and manners. On reaching it I found a great number of persons assembled to see the lascars, and after having minutely examined our skins, clothes, and hair, they dispersed. This evening we again ate a hearty meal of rice and sweet potatoes, and went to bed, or rather, lay down on some planks.

"Went down next morning to the beach at seven o'clock, and finding nothing in sight returned home (for so we now began to call it), and ate our breakfast; after which a number of persons came to see us as usual, many of whom were remarkably athletic in appearance, and desirous of trying their strength with ours. They put forward one particularly strong-looking man, standing about five feet nine inches, as a match for either the English pilot or myself; but upon trial with him and others, we found that their muscular powers were much inferior, the pilot who was rather a stout man, and about five feet seven inches in height, always throwing every one who attempted to withstand him. Went to the top of another hill, and found the place we were in had the appearance of an island, there being a deep, though narrow, bay running inland as far as the eye could reach. When we got

back we found our host dressed for going out. He made motions for me to go with him. I did so, and we walked about three miles, when we came to a large village; and after passing through two narrow streets, crowded with shops, we went into one filled with China ware, teas, and different things, and fitted up very much in the style of a large chandler's shop in England, there being a counter, with drawers and shelves, for placing the articles for sale upon. Here they brought out a tin canister, containing about twenty pounds of good white lead, the use of which I think they had some knowledge of. I likewise saw, to my surprise, a patent water-closet, such as are used in ships, complete, with the exception of the leaden pipe, which had been cut off; they seemed entirely ignorant of the use of it. I had hardly been in the shop ten minutes, when it was so crowded with people that they were obliged to remove me to an upper room, where only the more respectable were admitted to see me by paying so much a head. They were very anxious to see me write, which I did. Sometimes they made me walk across the room, and were continually annoying me by feeling my flesh, taking hold of my trowsers and flannel waistcoat. Amongst the first who were admitted was a young man very well dressed, and upon my making him understand that I had been robbed of my clothes, he appeared to take greater notice of it than any one else, and held some conversation with the people who were exhibiting me. This individual, as I afterwards understood, was the son of the mandarin. Our exhibition lasted about two hours; we then attempted to go down stairs, but found it almost impossible, for the shop and all the surrounding places were thronged with people.

"We got through the town of Maimee, for so I learned they called it, with very great difficulty, on account of the number of persons that surrounded us, and it was almost sunset before we reached the house. A conversation ensued, by which I learned where we were, and told him our situation. We then went to supper, and afterwards laid down to sleep; they at first locked us up at night, but now left it off."

After remaining here ten or twelve days, during one or two of which he was exhibited as before, until the curiosity of the people began to be satiated, an order arrived that the officer and men should be forwarded to Canton. His boat-cloak, which had been stolen, was restored to him. His host, though he shared in the profits of the exhibition, continued very kind, and invited him, during his stay, to a feast which was given by the old man in honour of his son's wedding. It was a dull-enough affair, no females being visible, and the men amusing themselves with firing crackers, and burning pieces of gilt paper. The officer and crew left Maimee (which is a fishing station, but apparently populous,) on the 4th of February. The account proceeds:—

"At seven P.M. we all, in company with our host, the old interpreter, and two soldiers who had charge of us, embarked on board a small boat. We found we were proceeding, by an order from government, to a large city called Yong Cong. At midnight we came to an anchor in a very narrow river, and remained in the boat till morning.

"We left the boat at six A.M. and went on shore, the people flocking round us so thick that we could scarcely make our way through them. Our host provided sedan-chairs for himself, the interpreter, and me. They bore some resemblance to the English ones in shape and size, but made of bamboo; and the poles, which were fastened to the upper part, made, by a cross-bar, to incline sufficiently close to each other that the ends might rest on the shoulders of the two bearers. In this manner we proceeded over a very flat part of the country, which was cultivated to such an extent,

that the roads were not left wider than a narrow foot-path. After passing through several villages for about sixteen miles (the lascars and pilots walking), we were obliged to leave the chairs, and get into a small flat-bottomed boat, which brought us in an hour to a fine river, on the banks of which the large-walled and ancient-looking city of Yong Cong was situated. We went inside of it, and were all taken into a large outer court, adjoining the mandarin's house, where we were kept waiting for about two hours, the people crowding round, and climbing on each other's shoulders to see us. We were then taken into an inner court, where none of the people outside were permitted to enter. Here the mandarin was seated at a table, with a desk before him, and surrounded by a number of attendants. On entering, I took off my hat; but one of the men who brought us in gave me a smart blow for not going down on the ground as they did, upon which the mandarin said something to him, and I was not compelled to do it. After hearing our story, through the means of a Peking interpreter, he particularly questioned us as to whether we came on shore with arms, and upon finding that we had not, he promised to send us on to Canton. We thanked him, and went out, following a man that led us to a house where we were to wait for further orders. Here we had some rice and sweet potatoes given to us, and then retired to rest. Our bed was straw.

"Along with the old interpreter, the two pilots, and one lascar, I went, at six o'clock, to see the Chinese soldiers exercise. There were about 150 or 200 of them, armed with a light sort of matchlock, the match itself being twisted round the butt-end of the piece, which I should think could not possibly stand more than three or four rounds without going to pieces. The officers were mounted on small ponies; the men's dresses were all alike, though they did not differ at all from those which are worn by the people in general, being loose trowsers and frocks, made of blue nankeen, with a cloth cap, fitting close to the head, and turning up all round. We were too late to see the exercise, which was just finished as we arrived; and the troops crowded round us, and began to haul us and our clothes about, apparently through mere curiosity; but their officers called them off, when they dispersed. The rabble then began to pull us about, so that we were forced to take to our heels and run up to the top of a neighbouring hill, where we kept them off by pelting them with stones; at last they came up behind us, and we were forced to run down to the town, the gates of which they were not allowed to enter, they being only inhabitants of the suburbs. We then returned to the house, the master of which asked me to write him something, and gave me a large sheet of paper. I wrote him the English alphabet, in large letters, to which I attached the date of our being there, together with my name, and that of the ship I belonged to; and he put it into a gilt frame, and hung it up in his best room.

"The city, I should think, from the view I had of it from the hill, was nearly three miles in circumference. The houses were built in much the same style as those we had seen at Maimee. The walls, which were about twenty-five feet high, were in a very ruinous condition; there were four gates to them, and a cannon at each, about the size of a 24-pounder, but not mounted.

"At seven P.M. we embarked in a boat under a new guard of six soldiers, and continued on our way all night. At eight in the morning quitted the boat, and proceeded on foot through very narrow and bad roads, sometimes over barren mountains, sometimes through cultivated fields. Over the narrow plains huge rocks were to be seen in all directions, under the towering and terrific-looking fragments of which we were often obliged to pass. In the vicinity of these we stopped at

an old and magnificent-looking temple, into which our conductors went to pray, and after they had done permitted us to enter. It was beautifully paved, with a light-coloured stone, and part of a black rock close to the building was ingeniously inclosed for an altar, and contributed greatly to the ornament of the place. This day we travelled about thirty miles on foot, with nothing to eat but what sweet potatoes we could pilfer out of the fields in our way, and scraped with a knife that one of the pilots had kept." Mr. Hudson states that a dollar a day was allowed by each mandarin at the different stations for the maintenance of the party; but whether this was insufficient, or there was roguery on the part of the conductors or guard, does not appear.

The details of the journey to Canton after this are very similar to what has been given, the party proceeding partly by land and partly by water. The writer remarks,—"The houses in all the cities and villages through which we had passed were built of stones and bricks, and tiled, and were on the whole very good. The household utensils, as well as the implements of agriculture, were very similar to the English; the plough was smaller, one man could carry it. All this time we had not seen anything in the shape of wheeled carriages, with the exception of three or four barrows and two carts, drawn by buffaloes, and the wheels of these were made of solid pieces of wood, about three feet in diameter, four or five inches in thickness, and narrowing towards the edges to not more than two, so that they cut into the roads to a considerable depth." On arriving at Canton they were released, on payment of the usual gratuity or exaction, which in the present case might have been charged as for "service performed."

This brief and imperfect narrative is useful, as contributing a little to our stock of information respecting the Chinese. The writer had not opportunity to do much in the way of observation of a practical nature; but he lets us see the Chinese character in a favourable light under particular circumstances.

The entire nation appears to be controlled by a regular and well-established internal police; and as to the curiosity and rudeness of the rabble, let the reader just fancy the sensation that would be created if a Chinese was suddenly to appear in a provincial town of England.

FRIBOURG SUSPENSION BRIDGE

[Concluded from No. 279.]

THE road from Berne crosses this valley at the entrance of Fribourg. It descends from the heights opposite the town, and now enters the city over the suspension bridge. But the old road, which remains for the use of the inhabitants in its line, descends steeply into the bottom of the valley, winds along the banks of the river, and passing the spot from which the view is taken, it crosses the river three times over wooden bridges before it reaches the gate at the south side of the city. From thence the ascent to the upper part, where the cathedral and principal inns are situated, is by extremely steep streets, rising obliquely upwards, and built one above the other; so that, in one place, the upper street is carried on stone arches over the roofs of the houses in the street below. Those who recollect the old town of Edinburgh will readily understand this. The distance saved by the new bridge is more than two miles, but this is a trifling advantage compared to the fatigue saved both to travellers and horses, in the steep and dangerous ascent from the lower gate to the upper part of the town.

The first view of the bridge from a distance is very striking; the cables on which it is suspended are scarcely visible, and it looks like a tight rope or long

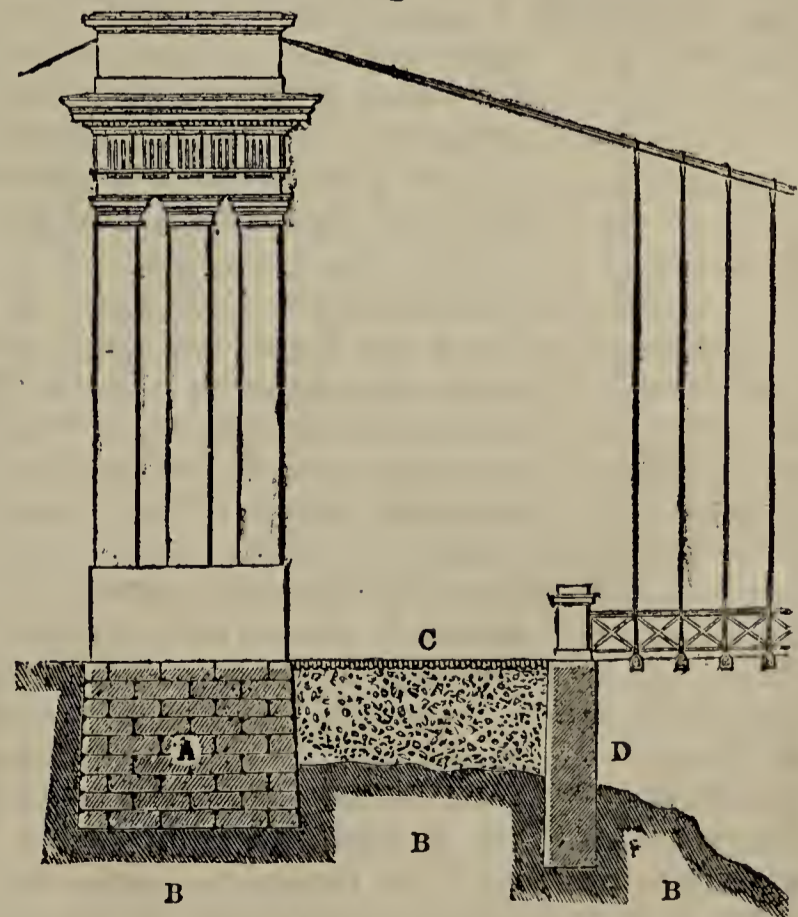
plank stretched across the valley. Two porticos, or piers, of solid masonry stand on each side, through which is the entrance to the bridge. They are built in the Doric style, and are seventy-five feet high from the foundation on the rock, and rise sixty feet above the level of the bridge. The width of them is forty-two feet, and the depth eighteen. On the tops of these piers are iron friction-rollers, over which the suspension cables pass, which are firmly attached to the solid rock on each side, at the distance of 160 feet from them. The road turns under the cables before it passes through the piers to go on the bridge. This was unavoidable at the north-east entrance, on account of the steep rising

Fig. 1.



of the hill; and on the south-west, or city side, the street to which it leads runs parallel to the river, and consequently at right angles to the bridge. A new approach in a straight line will probably be opened in time; but at present the buildings which are in the way would have required a great sum of money to purchase them, and the available funds are not sufficient. The foundation of the piers are on a hard and solid rock, and placed (for greater security) at the distance of thirty feet from the edge of the precipice. A small semi-circular terrace intervenes between each of the piers and the bridge, which add much to the elegance of the whole appearance, and afford room for the toll-houses. The view from them is most beautiful up and down the valley, and towards the Alps. A section of these terraces is represented in Fig. 2. A is the foundation of

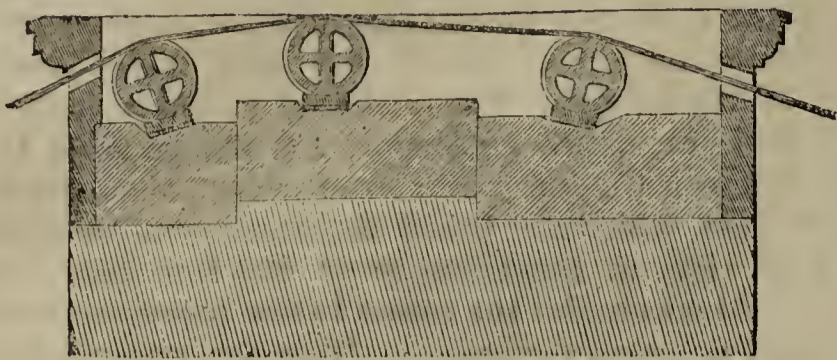
Fig. 2.



the pier; B, B, B, the rock; C, the terrace; D, a stone wall to keep up the earth and stones by which the ter-

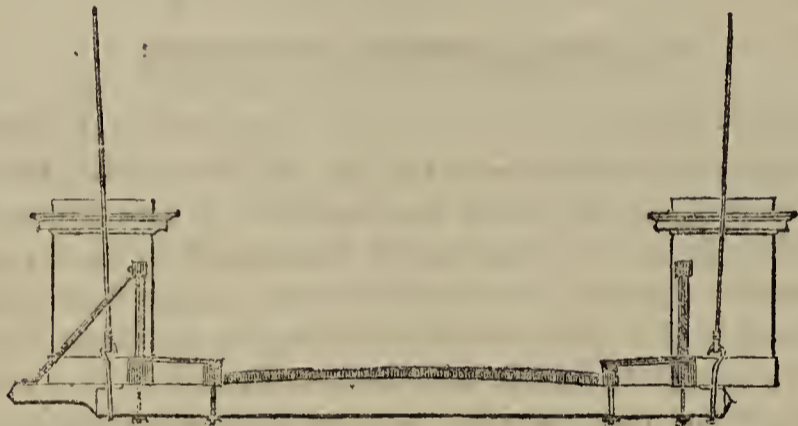
race is formed. In Fig. 3 are represented the friction-rollers over which the cables pass. These rollers are of

Fig. 3.



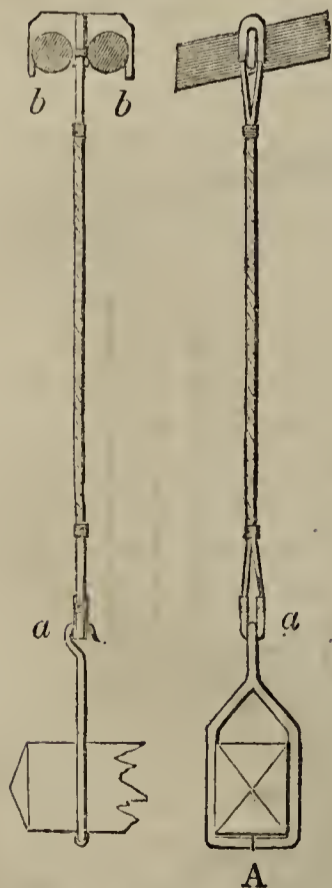
cast-iron, and each supported on a massy block of Jura limestone, which is nearly as hard as granite. The whole pier is built of the same materials. All the blocks fit most accurately, and are hewn with fair faces and well squared. They are fastened together with iron bolts and straps, and every interstice between them is filled up with a strong mortar poured on in a liquid state; so that the whole forms nearly a solid mass like a rock. The iron used in this part, which amounts to upwards of twelve tons, came from England by Genoa, was carried over the Alps by the Simplon, and by very steep roads to Fribourg. Notwithstanding the expense of the carriage, it cost 20 per cent. less than iron which is manufactured within thirty miles of the spot could have been procured. Fig. 4 gives a transverse section of the bridge as you enter from the terrace.

Fig. 4.



The whole bridge is supported or hung on four wire cables, which are suspended in pairs from pier to pier, forming a curve, of which the chord is 870 feet, and the perpendicular bend in the middle is 55, where they come down within a foot of the road. This road, 22 feet broad, is formed of fir-planks, resting on rafters, which are again supported by beams projecting on each

B Fig. 5.



side of the bridge, where they rest in strong iron stirrups (fig. 5, A). A raised path for foot-passengers, three feet wide, runs on each side. The hook at the upper part of the stirrup (a a) is passed into the loop of a cord or wire, at the upper end of which is fixed a double hook (B), embracing two of the cables, of which the section is seen at b b. Thus the beams are suspended at both ends from the cables. They are 163 in number, and at the distance of between four and five feet from each other. The rafters, on which the planks of the road are strongly fixed, lie across the beams, and are firmly bolted to them, which gives the whole road a considerable degree of stiffness. This is increased by an oaken railing, or parapet, formed of a succession of St. Andrew's crosses, surmounted

by a strong top-rail. The railing is rather massy compared to the rest of the bridge; but it gives greater solidity, and serves to prevent the fears which a slight railing might have excited in those who traverse the

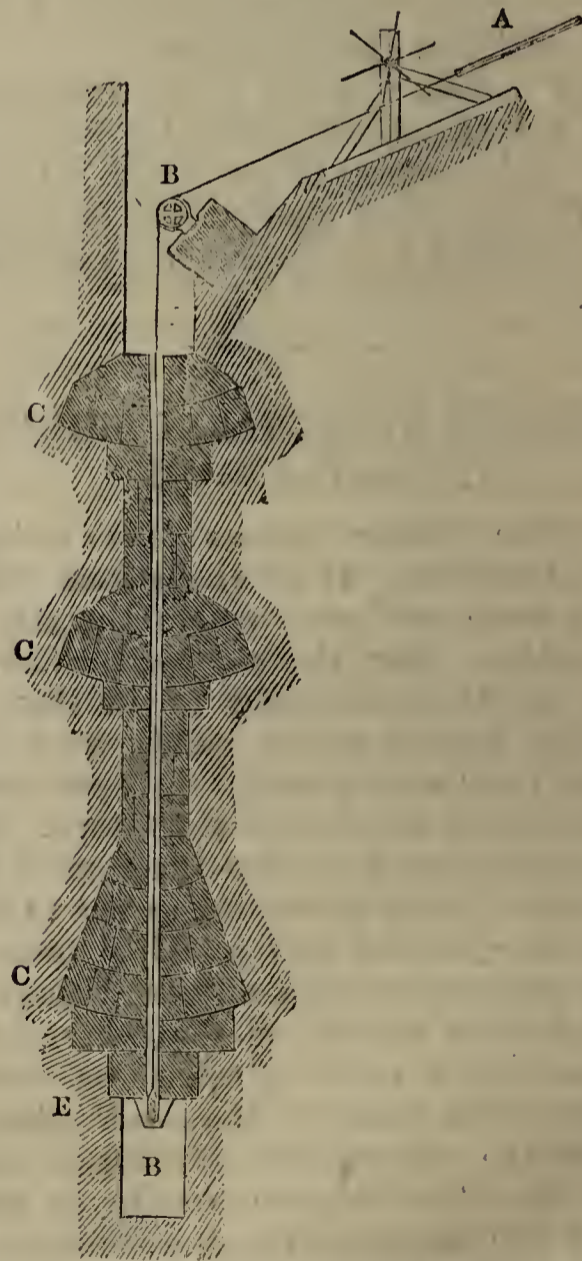
bridge on foot at so great a height. The top of the steeple of a church built in the valley is looked down upon as an inferior object.

The cords by which the beams are suspended from the cables are each composed of thirty wires, about one-twelfth of an inch in diameter; and as each of these can support, without breaking, a weight of 1200 lbs., and there are 163 pairs of them, they can sustain a weight of upwards of 5000 tons, equally distributed over the road, including the weight of the road itself.

The cables, which we shall now more minutely describe, are composed of similar wires formed into fifteen bundles of eighty wires each, they are not twisted like the strands of a hempen cable, but each wire goes straight from end to end; and the whole fifteen bundles are firmly tied into a cylindrical form by means of annealed wire wound round the whole, at intervals of two or three feet. Two such cables are placed close together on each side, and pass over the friction rollers on the piers described before*.

To prevent the wearing out of the cables by the rollers, and to divide the pressure upon them more equally, the fifteen bundles are not tied into a round form at the place where they go over the rollers, but are flatted out, and form a strap a few feet long. They are then again united in the form of a cable till they reach the place where they are fixed to the rock. The manner in which the ends are secured is ingenious and worthy of description. An oblique tunnel is excavated in the rock in the direction in which the cables descend from the piers, to the depth of forty-five feet from the level of the road on the city side, and twice that depth on the other. At the end of this a vertical pit or well is made in the solid rock, to the depth of forty-five feet; and the sides of this pit are cut into bevelled cavities, as is represented in fig. 6. A is the

Fig. 6.



oblique tunnel, B B the vertical well, C C C the cavities in the side of it. In this well are pillars of

* There is a distance of nearly thirty feet between the two pairs of cables, and as the stirrups are only twenty-four feet from each other across the bridge, the suspending cords converge as they descend to the road, this adds to the steadiness of the bridge.

masonry, the blocks of which are so arranged as to fit the cavities and resist any pressure upwards. Through the centre of each pillar is a small cylindrical bore, which admits of a cable of half the size of the main cable. At the bottom is a very large block with a hole bored through the centre; the cable is passed through it, and fixed round a very strong piece of iron, which forms the anchor and bears the whole strain. Each main cable is attached to two others, which passing down the oblique tunnels and over friction-rollers at the entrance of the well, are secured at the bottom in the manner described. There are consequently eight such fastenings at each end, which bear the enormous strain of the cables. Room is left to admit of the lower parts being occasionally inspected.

The cables were raised from pier to pier without much trouble, each of the fifteen bundles being raised separately, and then the whole firmly connected. The descending cords were then hooked on, the stirrups affixed, and the beams put through them. In this manner the road was carried forward rapidly and the bridge completed. The length of the cords were so adjusted that the bridge rises a few feet in the middle, which tends to prevent too great vibration. Here the hooks, which embrace the cables on each side, and the stirrups, which hold the ends of the beams, touch each other. The cords are gradually longer towards each pier till they are equal to the height of the piers at each end.

Great pains have been taken to have every wire stretched equally, and the whole firmly bound together. They are separately painted and varnished, and the whole cable is painted white, in order to make the least appearance of rust conspicuous.

The work, after some interruption, was begun in the spring of 1832, and the bridge was completed and opened to the public on the 23rd of August, 1834. No serious accident occurred, nor was there a single life lost, which is reflected on with peculiar satisfaction by the engineer and architect, M. Challey.

We shall conclude this account with a short history of the construction of this bold specimen of modern art. Many ingeniously-constructed wooden bridges are to be found in all parts of Switzerland; and that over the Rhine at Shaffhausen, which was destroyed in the last war, has been celebrated for the boldness of the span, which was 360 feet. The idea of a bridge over the valley of the Sarine at Fribourg was more than once entertained, and proposals and plans were made; but the required height of the piers, and the danger from gusts of wind to a bridge so exposed, and which, if roofed in, as is the case with most of the Swiss wooden bridges, and essential to their duration, would present too great a surface to the storm, appeared insurmountable obstacles. When suspension bridges became more generally known, the idea of a bridge revived; but all calculations of the expense of the common iron chains, or rods of suspension, where iron is so dear, deterred any one from undertaking it. The same difficulty had led to the substitution of wire, of which a small foot-bridge was constructed in 1823 over the Fossi at Geneva; and in 1825 M. Leguin constructed a larger bridge of wire over the Rhone. On the plan of these M. Challey, a French engineer, who in partnership with M. Sequin, jun., had built a wire bridge over the Rhone at Beaucaire in 1829, proposed to erect one at Fribourg, and, after some negotiation, he contracted for it on the following conditions:—

1. The ground for the works to be provided; and the approaches made for him.
2. 300,000 francs (12,000*l.*) to be paid him as the works proceeded, and
3. The receipt of all the tolls for forty years from the opening of the bridge.

In consideration of this M. Challey engaged to finish

the bridge, according to the plans agreed upon, at his own cost and risk, having the option of constructing it with two spans or only one;—to keep it in repair for forty years, at his own cost.

The option of a bridge with two spans was inserted, to satisfy some of the parties, who had a prejudice against so great a span as impracticable; but M. Challey never for a moment entertained any other idea than that of a single bridge. The pier, which must have been built in the middle, must have been upwards of 200 feet high, and have had a very deep foundation: the expense of it would have been enormous, and the effect far inferior. The whole bridge, as it now stands, cost M. Challey only 600,000 francs (24,000*l.*), an extremely small sum considering the expense of the materials. The wire was drawn at Bienne, from iron forged in the canton of Berne.

The strength of the cables of suspension is calculated to be sufficient to support on the bridge, without breaking, a load of nearly 500 tons. The greatest load which can be upon it at one time in carriages, horses, and men, does not exceed 160 tons. It was tried in the severest way before it was opened to the public; for a train of artillery, of 15 pieces of large cannon, with 50 horses, and 300 men, passed over it on the 15th of October, 1834. Soldiers marched and counter-marched over the bridge, and men were crowded as close as they could stand, on different portions of the bridge, which made it sink several feet at those points. On the 19th it was publicly opened, and above 2000 persons were on the bridge at the same time.

THE BULL-FROG.

[From a Correspondent.]

THIS species of frog is found in almost every marsh and pond of North America. Its head, back, and legs are of a light green colour, more or less intermixed with small spots of brown; but on its sides and belly it is of a yellowish tint, fading almost to a dusky white. It sometimes grows to a very large size, the body measuring seven inches in length, and four or five across; and weighs nearly two pounds. It is seldom or never found at a distance from the waters it inhabits, living almost exclusively in this its favourite element. The following fact will give the reader some idea of the loudness of its note. Opposite to the fort the eastern extremity of Lake Erie is reduced to about three miles in breadth, and on its southern side is the town of Buffalo. Near this town is a deep muddy creek, with low and marshy shores, and here the bull-frogs are found in great numbers during the summer months. Standing at my own door at Fort Erie, I could distinctly hear their sonorous music booming across the water, although the distance was over three miles.

Its favourite haunt is the shallower part of ponds, among the floating leaves of the water lilies; where, in a summer evening, one may see vast numbers of their green heads emerging just above the lily-leaves of precisely the same colour. They are very wary and shy; for on gently rowing or paddling a canoe towards them, they give a quick snort, and instantly plunge into deep water. By approaching them with extreme caution, I have sometimes, however, surprised them, and succeeded in stunning them with the flat part of the oar. When dressed and brought to table, I invariably have found them tough and fibrous, although many persons consider their hinder parts an excellent dish.

Although naturally so shy and timid, I succeeded in taming one, after an intercourse of a couple of months. I was then residing upon the banks of a small lake, in the bosom of surrounding woods, which was well stocked with various kinds of excellent fish—particularly one sort—there known by the name of “salmon-trout.” During the summer I used frequently to angle

in different parts of the lake for them, and also would place floating lines across some of the convenient bays and inlets. My usual bait was a small live fish, to procure which I had to angle with a small hook, baited with a small worm, in the shallower water near the shore. One day while I was thus employed, I observed a large bull-frog perched upon a prostrate tree which lay partly immersed in the water. Having caught a sun-fish, just at the moment I first observed the bull-frog—and that sort of fish being the least desirable kind of bait for trout-fishing,—without unhooking it I swung it as near the frog as practicable. I saw that he anxiously watched the movements of the fish, and after some further attempts I succeeded in placing it within a few inches of him, when he darted quickly upon it, and had it in his capacious mouth in an instant. I then drew him gently towards the small skiff in which I was sitting; but as he approached it he struggled so violently, that he either let go his hold, or accidentally lost it; for he disappeared in the water for a few seconds, when I observed his green head close along-side of his favourite resting-place, and shortly afterwards he ventured quite out of the water and took up his original abode. After this our first interview, I found him daily occupying the same place; and in order to improve our acquaintance, I treated him regularly to a sun-fish breakfast. When our daily intercourse had continued for some weeks, I determined upon taking him prisoner. For this purpose I baited a large hook with a sun-fish which I threw towards him; and the poor frog, unconscious of any harm, seized it with his usual avidity, when I struck the line somewhat smartly, and found that I had hooked him. I then drew him gently towards me, and after some fruitless resistance on his part, hauled him into my skiff. He seemed dreadfully alarmed on my laying hold of him, in order to relieve him from the hook and fish which he had nearly swallowed; and having performed the operation without paining him more than necessary, and having detained him for half an hour, I then permitted him to plunge into his favourite element. I supposed that our acquaintance would probably end here, but no such thing; for on the following morning when I repaired to my fishing ground, I found him at his wonted station. I fed him daily as before, and could perceive that he allowed me to approach him much closer, without exhibiting the degree of alarm he had done at first. I one day tied a fish to the line without any hook, and after he had laid hold of it pulled him quietly into the boat, when he struggled violently, ejected the fish from his stomach, leaped overboard, and swam to his place of refuge. Our intercourse after this became daily more familiar; so that in the lapse of a few weeks he would mount upon the flat part of an oar when I held it close to him, and alight from it in the opposite end of the skiff from where I sat. Thither I would throw him a small sun-fish or two, which he quickly disposed of; after which he would jump over-board, or again mount the flat part of the oar, in order to be handed back to his resting-place. Soon after this he would take his accustomed allowance from my hand, at last permitted me to handle him gently, still however exhibiting some degree of timidity. After this I took him across the lake, and confined him in a hogshead, open at both ends, which I placed near the shore where the water was only about a foot deep. In the centre of the hogshead I placed a stone for him to perch upon, which arose just above the surface of the water. He remained a few days in this confinement, eating from my hand, until one day I found him missing, and concluded he had been devoured by a minx or an otter. But on examining the shore for a short distance, I discovered him perched on a decaying log, close to the water's edge. On calling him by the name (Ralph) to which I had lately

accustomed him, I thought that he recognised my voice immediately. I took him in my hand without his attempting to escape, and returned him to his solitary abode. The next morning he again was missing, when I went in search, and found him near the same place as before. I now determined to watch his mode of escaping; for which purpose I hid myself in the bushes close by. I had remained there but a few minutes, when I saw him spring clean over the upper edge of the hogshead into the water. The fact was this, that from his great muscular strength and agility he was able, at a single effort, to leap fairly over the top of the cask, which was three feet perpendicular above the top of his supporting stone. On discovering this I removed the stone, and in its place gave him a floating piece of wood to perch upon, which I found to answer my purpose completely; for upon his making a spring the perch gave way under the effort; he thereby lost his balance, and all his attempts were unavailing. Having satisfied myself of the practicability of making a domestic pet of a wild bull-frog, I made a present of Ralph to the daughter of a friend of mine, who promised to be kind to him, and to have all his wants cared for. But I afterwards understood that the lake had been visited by a tremendous storm, which had overturned Ralph's prison-house, when, of course, he escaped; but whither, or what became of him, no one could ever tell.

A friend of mine, who lived close to the outlet of a small lake, within a few miles of the scene of Ralph's adventures, used to bestow a great deal of care and attention upon the rearing of young ducklings; but after all had the mortification to find his efforts fruitless. The old ones would hatch fine healthy broods; but as soon as they were strong enough to waddle to a sedgy stream that issued from the adjoining lake, one or two daily disappeared, to the great annoyance of my friend. Having suffered those continual depredations for two or three seasons, he one day witnessed a nice duckling gradually disappear under the water; but judge of his surprise when he beheld a huge bull-frog crawl out upon the prostrate trunk of a tree, with the duckling's feet still protruding from his capacious mouth! The mystery was thus solved; the bull-frogs had swallowed all my friend's young ducks.



[The Bull-Frog.]

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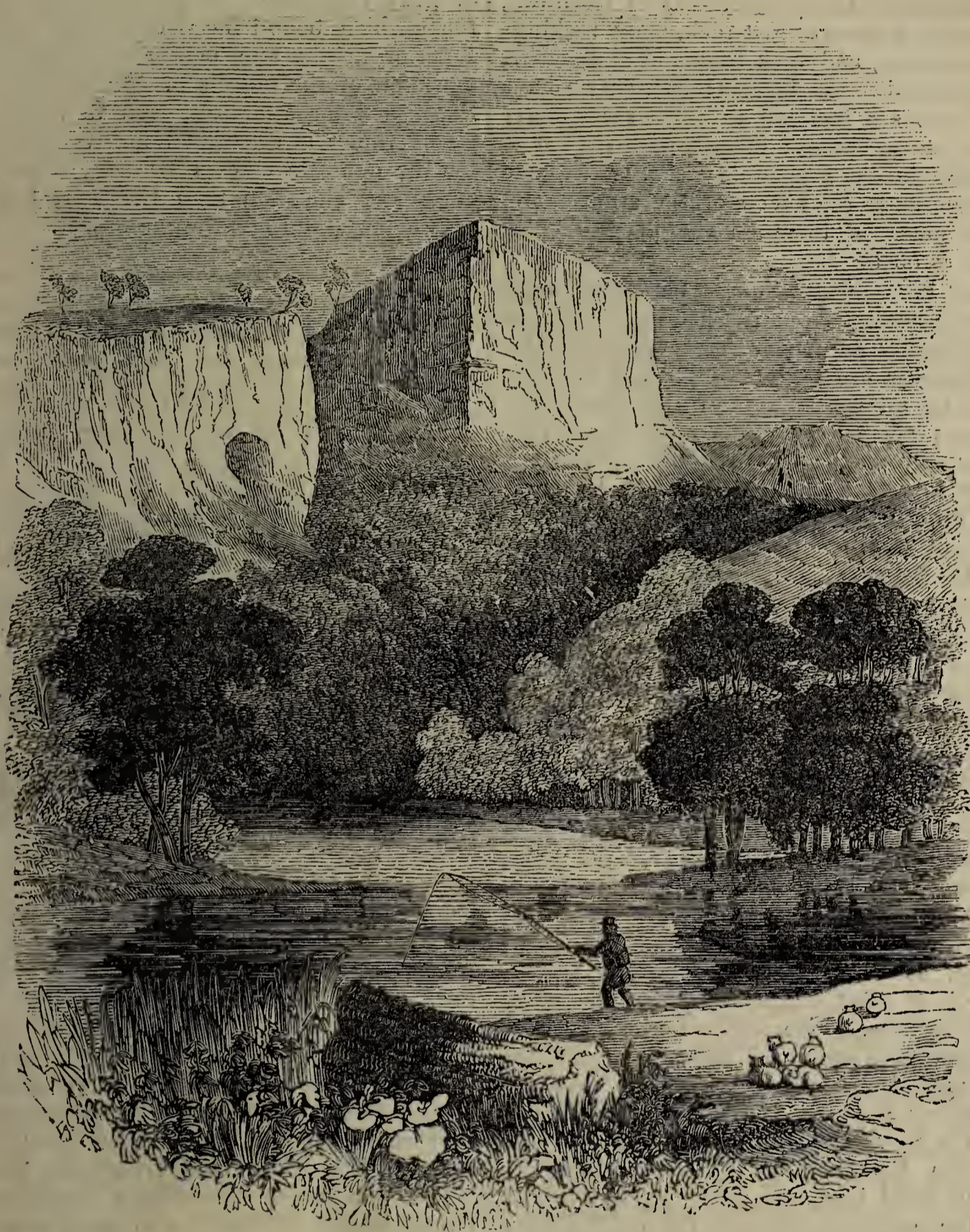
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281.]

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MATLOCK HIGH TOR, DERBYSHIRE.



[The High Tor at Matlock.]

THE word *tor* is a Saxon one, from whence, according to the etymologists, comes our word *tower*. The Latin *turris*, the Saxon *tor*, and the English *tower*, appear to be related in their signification, meaning, in their original sense, something erected on an eminence. We have preserved the syllable *tor*, as we have many other words which are of what are termed Cimbro-Celtic and Teutonic or Gothic origin, in the names of many places of Britain. In the counties of Derby, Devon, and Cornwall, there are numerous masses of gritstone and granite, fantastically piled, some of which form what are called "logans," or rocking-stones, and popularly "cheese-wrings," or whatever else the common notion may fancy them to resemble*. Many of these masses are to be found on great eminences, along with those mysterious circles and rock-basins which are ascribed to the Druids. Dartmoor in Devonshire abounds with

* See 'Penny Magazine,' No. 244.

those seemingly artificial but really natural tors, which still bear the name of "tor," along with some distinctive and expressive adjective. These Mrs. Bray, in her recent work 'The Tamar and the Tavy,' laments are beginning to fall before the hammer of the railroad labourer, their immense masses being found useful for the purposes of those who look more to present utility than to the recollections of the past. That many of these tors were used by the original inhabitants of Britain, or at least by their priests, appears probable. Hence has arisen the controversy, whether the tors, bearing as they do the marks of having been used for some kind of ceremony or religious rite, were piled by the hand of man, or formed by the action of the elements. If piled by manual labour, how was the work performed—whence the knowledge of mechanics? And yet the singular and fantastic manner in which many of them are piled, as if some gigantic hand had

lifted them there, seems to forbid the idea that Nature, or, strictly and properly speaking, (for the word nature is a mere personification,) the action of natural causes, should have produced results apparently so whimsical. But to lay aside all useless guessing, which only provokes curiosity without gratifying it, the common-sense way of settling the question would appear to be this:—if these tors, which are found with circles and rock-basins, were really used by the Druids, why, they must have found them there, and appropriated them to their purposes. “Here, too,” say the authors of the ‘Magna Britannia,’ speaking of Derbyshire, “as in Cornwall, among the detached masses of grit-rock, many rock-stones have been found, and rock-basins in abundance, and, as usual, ascribed to the Druids: but, as we have before observed, we are inclined to refer the greater part of these to natural causes; indeed, with respect to the round hollows in the grit-stone rocks, which have for ages been exposed to the effects of the atmosphere, we observed as many of them on the perpendicular sides of the rock as on the top.”

The preceding brief disquisition is necessary to explain how the well-known almost perpendicular rock at Matlock, in Derbyshire (of which the wood-cut gives a view), should have the word “tor” applied to it. The tors are usually on an eminence; for the Druids are supposed to have preferred some lofty place where they could see and be seen during their religious ceremonies in a manner calculated to impress the rude imagination. So the word came to signify, not merely the singular masses of which we have been speaking, but also any abrupt steep rock, rising, as it were, detached and alone. But it is always accompanied, as already mentioned, by some qualifying adjective. The “High Tor,” which is a comparatively modern application of the name, sufficiently explains itself;—but Mam Tor (another tor in Derbyshire) means the “shivering mountain.”

Matlock is well known as one of our English favourite summer resorts of invalids and idlers, as well as of those who go, for recreation or information, to see the wonders of the Peak of Derbyshire,—the rocks, mines, and caverns, and other mountainous scenery of that truly singular and interesting region. “Matlock Dale,” says Mr. Jewitt, in a little work called the ‘Matlock Companion,’ is naturally a deep narrow ravine, how produced, or by what convulsion, must be left to geologists to determine. One side is formed by lofty perpendicular limestone rocks, the other by the sloping sides of giant mountains; along the bottom runs the Derwent, sometimes pent up in a narrow channel, and obstructed by the fragments which have, from time to time, fallen from the beetling tor, and sometimes spreading like a lucid lake, and reflecting as a mirror the beautiful but softened tints of the overhanging foliage.” The mineral springs and scenery of Matlock Dale have created a pleasant village, composed of inns, lodging-houses, and bathing-establishments. The Dale is about two miles in length. “Much money,” says Mr. Jewitt, in an amusing strain, “is obtained here by collecting what they call *curotities* (that is, spars, lead-ores, &c., in their natural state), and selling them to visitors. Almost every person is in possession of something or other to turn into money; and petrification-shops, under the name of ‘museums,’ to which not unfrequently is prefixed the word royal, stare the stranger in the face at every step. One would not, at a distance of perhaps 140 miles from London, expect kings and princes to be such familiar visitants. In fact, the inhabitants of Matlock, though not reputed alchemists, seem to make of every spar or pebble a philosopher’s stone, which, though not always convertible into gold, seldom fails to produce silver.”

Matlock Dale, which in the time of De Foe was al-

most inaccessible from the want of a road, and which, still more recently, was praised as being a retired secluded spot, now lies on the direct line from London to Manchester. This, as is well remarked by Mr. Jewitt, though destroying the previous character of the place, has brought it more into notice, and a much larger accession of visitors than it could have otherwise received.

The High Tor is a huge rock, which rises almost perpendicularly from the Derwent to a height of upwards of 400 feet. The lower part is covered with foliage, but the upper part presents a broad bold front of grey limestone. It forms a part of the chain of rocks which bound the river on the east, but from its superior height and boldness is one of the most remarkable of the objects of Matlock Dale, and is distinguished for its effect, even in the midst of scenery all of which is celebrated for its picturesque beauty. On the opposite side is Masson, a rock or mountain of greater elevation than the Tor, but inferior to it as a striking and picturesque object.

WATCHMAKING IN SWITZERLAND.

THE following details are given in an abridged form from a ‘Report on the Commerce and Manufactures of Switzerland,’ by Dr. Bowring, recently laid before Parliament. A large portion of the facts were furnished to Dr. Bowring by M. Houriet, an intelligent manufacturer, who, in his communication, dated January, 1836, asks for indulgence on the plea that he is neither “a learned man nor a writer,” and yet, says Dr. Bowring, “a more interesting and instructive document has seldom, I believe, been furnished.”

One of the largest and most interesting branches of Swiss industry is the watchmaking trade. It is carried on to an immense and still increasing extent in the mountainous districts of Neuchatel, in the French portion of the Canton of Berne, and in the town and neighbourhood of Geneva. It has been a source of wealth and comfort to many thousands of the inhabitants, who, in the seldom-visited villages of the Jura, have gathered around them a large portion of the enjoyments of life. Switzerland has long furnished the markets of France; and though the names of certain French watchmakers have obtained a European celebrity, yet Dr. Bowring was informed by M. Arago that an examination into this trade had elicited the fact that not ten watches were made in Paris in the course of a year, the immense consumption of France being furnished from Switzerland, and the Swiss works being only examined and rectified by the French manufacturers. The contraband trade into France was immense, and no Custom-House regulations could stop the introduction of articles so costly and so little bulky. They are now admitted into France at 6 per cent. for gold, and 10 per cent. for silver, watches, and a considerable quantity pays this moderate duty.

The Jura mountains have been the cradle of much celebrity in the mechanical arts, particularly in those more exquisite productions of which a minute complication is the peculiar character. During the winter, which lasts from six to seven months, the inhabitants are, as it were, imprisoned in their dwellings, and occupied in those works which require the utmost development of skilful ingenuity. Nearly 120,000 watches are produced annually in the elevated regions of Neuchatel. In Switzerland the most remarkable of the French watchmakers, and among them one who has lately obtained the gold medal at Paris for his beautiful watch-movements, had their birth and education; and a sort of honourable distinction attaches to the watchmaking trade. The horologers consider themselves as belonging to a nobler profession than ordinary mecha-

tics, and do not willingly allow their children to marry into what they consider the inferior classes.

The art or trade of clockmaking was introduced into the mountains of Neuchatel in a manner worthy of notice. As early as the seventeenth century some workmen had constructed clocks with weights, but no idea had been conceived of making clocks with springs. About the end of that century, an inhabitant of the mountains, returning from a long voyage, brought with him a watch, which was an object previously unknown in the country. It was put into the hands of a skilful workman to be repaired, who succeeded in doing so, and then tried to make a similar article. He succeeded in effecting this also, notwithstanding the difficulties which lay in his way, he having to construct the tools with which he wrought, as well as all the different movements of the watch. His success naturally created a great sensation; other workmen were stimulated to try what they could do, and a new branch of industry sprung up in the mountains of Neuchatel. During the first forty or fifty years a few workmen only were employed in watchmaking; and owing to the numberless difficulties they had to surmount, to the slowness of execution caused by the absence of convenient tools, the want of proper materials, &c., the productions and profits were inconsiderable. They began at length to procure the articles of which they stood in need from Geneva, and afterwards from England; but the high prices which these articles cost induced many of the workmen to attempt to provide them for themselves. They not only thus succeeded in rivalling foreign tools, but they eventually made many superior ones till then unknown. From that period they have constantly invented other instruments in order to facilitate and perfect the art of watchmaking; and at the present moment the manufacture of watchmaking tools and appurtenances is become a branch of industry of so much importance, as to enable the inhabitants to supply them to those countries from whence they formerly imported them.

It is not more than eighty or ninety years since a few merchants began to collect together small parcels of watches, in order to sell them in foreign markets. The success which attended these speculations induced and encouraged the population to devote themselves still more to the production of articles of ready sale; so much so, that nearly the entire inhabitants have embraced the watchmaking trade. The population has increased threefold, independently of the great number of workmen who are established in almost all the towns of Europe, in the United States of America, and even in the East Indies and China. From this period a great change has taken place in the country of Neuchatel, where, notwithstanding the barrenness of the soil and the severity of the climate, beautiful and well-built villages are everywhere to be seen, connected by easy communications, together with a very considerable and industrious population, in the enjoyment, if not of great fortunes, at least of a happy and easy independence.

"If our watches," says M. Houriet, "have attained a certain reputation of superiority, it is in a great measure to be attributed to the independence of our workmen, and to the advantage which they have derived from a careful and studied execution of the several articles intrusted to their respective and particular talents. Indeed, on the one hand, each artisan working at home, and for whomsoever, pays him the best price, and on the other, the merchant having an interest to encourage by paying the best prices to those who furnish him with the best materials and work, a kind of emulation is naturally excited among the workmen to obtain a preference and an advantage. Perhaps, also, the spirit which is generally diffused among the inhabitants of mountainous countries, added to the habits and customs

of our workmen, who are at the same time landed proprietors, has not a little contributed to this development of talent amongst our population. Living simply, and in the bosom of their families, occupied entirely (with the exception of a few slight agricultural cares) in the labours of their art, and not being exposed to those temptations which exist in and corrupt large societies, it is very natural that they should be more assiduous and more desirous of attaining perfection in their art; and the more so still, as they derive a greater benefit from it, their reputation and their interest are equally engaged.

"The present condition of this branch of industry is extremely prosperous, and it is with great difficulty that we can succeed in executing all the orders which we receive.

"As to the probable fate of this trade, it is even permitted to hope, and with much probability, that it is yet susceptible of extension. A watch is no longer, as it was formerly, an object of luxury, destined exclusively for the rich; it has become an article of the first necessity for every class in society: and as, together with the increased perfection of this article, its value has at the same time considerably diminished, it is evident that a common watch, which will exactly indicate the hour of the day, is actually (by its low price) within the reach of almost every individual who will likewise feel anxious to possess one. For this reason, and in proportion as commercial and maritime relations are extended and emancipated from the trammels in which the great central marts of commerce have involved them, so will distant nations become civilized; and it may be fairly anticipated that the art of watchmaking will form a part of the great current of improvement.

"The number of watches manufactured annually in this canton [Neuchatel] may be calculated to be from 100,000 to 120,000, of which about 35,000 are in gold, and the rest in silver. Now, supposing the first, on an average, to be worth 150 francs, and the others 20 francs, it would represent a capital of nearly 7,000,000 francs, without taking into consideration the sale of clocks and instruments for watchmaking, the amount of which is very large.

"Not only the whole of the European markets, but also those of the most distant countries, are now opened to our productions. The United States of America consume the largest proportion of our watches. There is, however, a great difference with respect to the degree of facility which is afforded to us by the several nations with whom we deal. In Austria, and in all the countries under her dominion, as well as in Sweden, our clocks and watches are prohibited, and only penetrate by fraud. In England, the duty is twenty-five per cent. for home consumption; and for the colonies, though there is in London a bonding depôt, it offers too many disadvantages and impediments to permit us to make use of it: for an article of such careful and delicate construction ought not to be mixed pell-mell with grosser commodities, as it runs too great a risk of being seriously damaged. In Spain, and in most of the Italian States, the duty is equivalent to a prohibition. In France, the duty has recently been reduced sufficiently low to render smuggling unnecessary. In Russia and in the United States, the duty, though high, can still be borne. In Prussia, the duty has always been moderate, and of late years it has been reduced by one-half in favour of our productions. Finally, the States of the German and the Swiss Confederation are the only countries which have been entirely open to this species of commerce; and it has always been easy to forward to Turkey and to the Levant by the free ports of the Mediterranean. We are making arrangements with Russia for an overland trade to China."

With the exception of gold and silver for the manufacture of the watch-cases, the other materials for the construction of the works or mechanism of the Neuchatel watches are of little value, consisting merely of a little brass and steel. The steel is imported from England, and is reckoned the best that can be procured; the brass, which was formerly brought from Holland, is now furnished by France, the French brass being now considered much superior. With respect to gold and silver, the inhabitants of Neuchatel have no other resource but to melt current money, which induces M. Houriet to suggest that an advantageous commerce might be opened up with such countries as possess the precious metals.

The number of workmen who are employed in watch-making is estimated by M. Houriet at from 18,000 to 20,000; but he says it is difficult to arrive at the exact number, as the population employed carry on the business in their own houses, and in the midst of their families. He calculates the wages of the workmen as running from 55*l.* to upwards of 83*l.* annually.

There are few districts in Europe where so large a proportion of the inhabitants are interested in savings banks as in the principality of Neuchatel. No less than 3084 persons, out of a population of 56,000 (being about one person in eighteen), had become depositors in 1834. There remained at the end of 1834, in the hands of the directors, a sum equal to 57,150*l.*, or, on an average, of about 18*l.* 10*s.* per individual. The interest allowed is three and a-half per cent., and the deposits are as low as one Neuchatel franc, or 1*s.* 1¼*d.* The directors lend money at four per cent. on landed or other undoubted security. The establishment has existed for twenty-three years, and publishes its accounts annually. The administration, with the exception of the cashier, acts gratuitously.

The spirit of adventure is very strong among the industrious inhabitants of the Jura Mountains. A great many of them have travelled into very remote countries, whence some have returned with considerable fortunes. A few years ago a watchmaker of Neuchatel found his way to China, where he amassed a handsome property by importing watches; and he returned home since, accompanied by a young Chinese, whom he caused to be instructed in the trade, and who had sailed for Canton only a few weeks before Dr. Bowring's visit.

The ordinary rates of wages are, for male domestics, from 8*l.* to 12*l.* sterling, and for females, from 4*l.* to 6*l.* sterling per annum. The average wages of agricultural labour are from 20 to 30 sous of Neuchatel, or from 1*s.* 1*d.* to 1*s.* 8*d.* per day. The wages of artisans vary extremely, the lowest being about 15 sous, and the highest 8 to 10 francs, that is, from 9*d.* to 11*s.* per day. It is only, however, the most expert and highest class of artisans, comparatively few in number, who earn the last-mentioned sum.

ENGLISH COINS.

[Concluded from No. 277.]

OWING to the want of trade, Constantinople furnished most European kingdoms with gold coins, which received the name of bezants, from Byzantium, the ancient name of that capital; and the term is still preserved in the blazon of arms where plates of gold are called bezants.

Bezants were the *solidi* of the old scale; they were six to the ounce, and they were in use till beyond the time of William Rufus; but it is asserted that their value was so entirely forgotten in the time of Edward III., that when the Bishop of Norwich was fined a bezantine of gold, to be paid to the Abbot of St. Edmondsbury for infringing his liberty, no one could tell how much

it was; and it was left to the king to decide how much he should pay. It also appears that bezant was a term applied to all kinds of gold money, and it was succeeded in the same general sense by the florin.

The first English gold coin is the penny of Henry III. (Fig. 32); it was current for twenty silver pennies, and was coined about 1257, it being the only gold piece stamped with the name of the Mint and moneyer. This monarch is stated to have coined it through distress for money; it is, perhaps, more properly called a ryal, and it was the first of the sort struck in Europe. This coin is very rare, three impressions only being known; and the gold series may be said to commence with Edward III., for no more appear till 1344, when that monarch issued a proclamation*, in consequence of which florins, half-florins (Fig. 35), and quarters

Fig. 35.



[Half-florin of Edward III.—Gold, 3*s.*]

were struck. The florin was then of 6*s.* value, but it is now intrinsically worth 19*s.*; it was an imitation of the florins of Florence, which bore on one side a large *fleur de lys*, and on the other St. John the Baptist. The forcible description by Dante of the agony of thirst induced by the ideal appearance of the green hills and rivulets of his native place, applies to a forger of these coins, as appears by these lines:—

“Ivi è Romena la dov' io falsai
La lega suggellata del Battista
Perch' io il corpo suso arso lasciai.”—

‘Inferno,’ canto xxx.

The coins of Rome, France, and England at this period have types nearly similar to the Florentine florin, but with different legends. The half-florin was sometimes called a halfpenny, and the quarter-florin a farthing (meaning of gold), which terms are by old historians sometimes applied to the divisions of ryals and angels. The florin, not dividing the larger ideal denominations equally, was found to be inconvenient; and in the same year the noble of 6*s.* 8*d.* value was struck, that being half a mark, the most general ideal money of that time. It was termed the noble from its material being of the finest gold used for coinage, and it was attended by half, or maille nobles, and quarter, or ferling nobles. The proportion of silver to gold was at this time as one to eleven.

These pieces, occasionally termed the rose noble, from the expanded rose (Fig. 41) on the reverse, with

Fig. 41.



[Rose Noble, or Ryal, of Henry VI.—Gold, 10*s.*]

* “Que trois monies d’or soient faites en nostre Tour de Londres: c’est assavoir une monie ad deux Leopert; courante la piece pur siz soldz que serra du pois de deux petits florins de Florence de bone pois.

“Et une autre monie d’or ad une Leopert; poisante la moiete de l’untre susdite monie currante la piece pur Trois soldz.

“Et une autre monie d’or ad un heaume; poisante la quarte

their halves and quarters, were the only gold coins till the angels of Edward IV., in 1465, impressed with the figure of St. Michael and the Dragon, and the angelet, or half-angel, of 3s. 4d. value; forty-pence became afterwards a proverbial expression for a small wager. The old lady says to Anne Boleyn, in Shakspeare's play of 'Henry VIII.,' "How tastes it? Is it bitter? Forty-pence, no." Forty-pence, or three-and-fourpence, still remains in many offices the legal and established fee. The angels of Henry VI. (Fig. 40) being struck

Fig. 40.



[Angel of Henry VI.—Gold, 6s. 8d.]

during his restoration, are a little posterior in date to those of Edward IV. There had been, indeed, the gold coin called the chaise (Fig. 36), but that was an Anglo-Gallic piece of Edward the Black Prince, and does not in strictness belong to the English series; it was called the chaise, from his appearing on it seated in a chair of state. There are still larger gold coins of

this prince, but the largest portrait is on his billon coins, in which he has an aquiline nose, a feature very

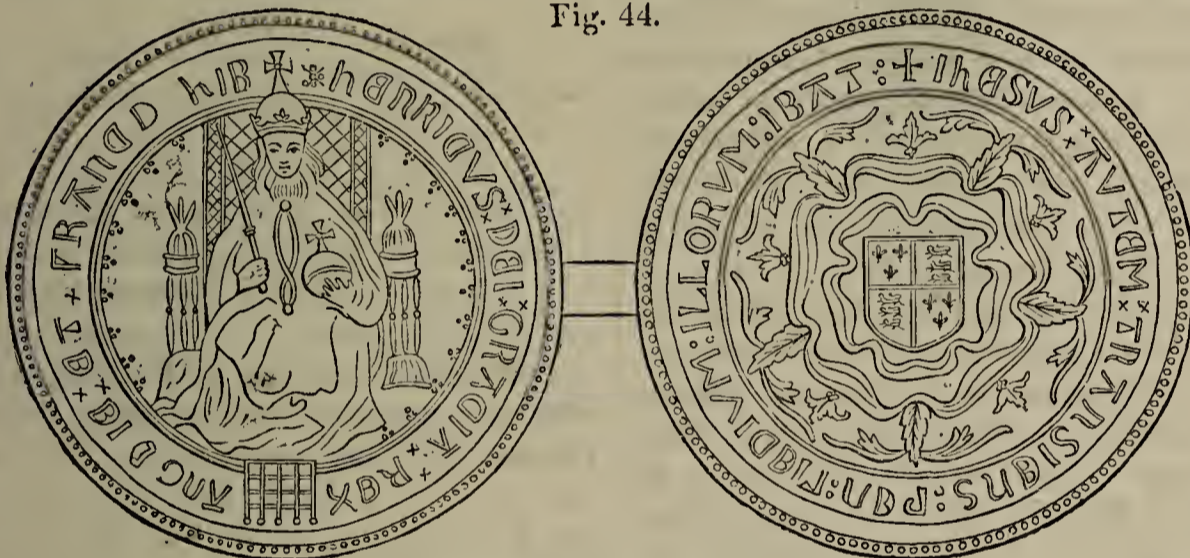
Fig. 36.



[Gold Chaise of Edward the Black Prince.]

different in his monument at Canterbury. His coins are known by his invariable style, "PRIMOGENITUS REGIS ANGLIÆ ET PRINCEPS AQUITANIÆ." There was a master and worker of the Mint appointed in the name of Edward V., but it is not probable that he coined any new monies. Antiquarians assert that, gold being scarce, Henry V. diminished the noble in size, though he retained the value of it; but that Henry VI. restored its size, and made it pass for 10s., under the new name of ryal (Fig. 41), a term borrowed from the French, who gave that name to their coin on account of its bearing the figure of the king in his royal robes. The ryal of 10s. and the angel of 6s. 8d., with their divisions, were the sole gold coins till 1485, when Henry VII. published the double-ryal, or sovereign, of 20s. (Fig. 44),

Fig. 44.



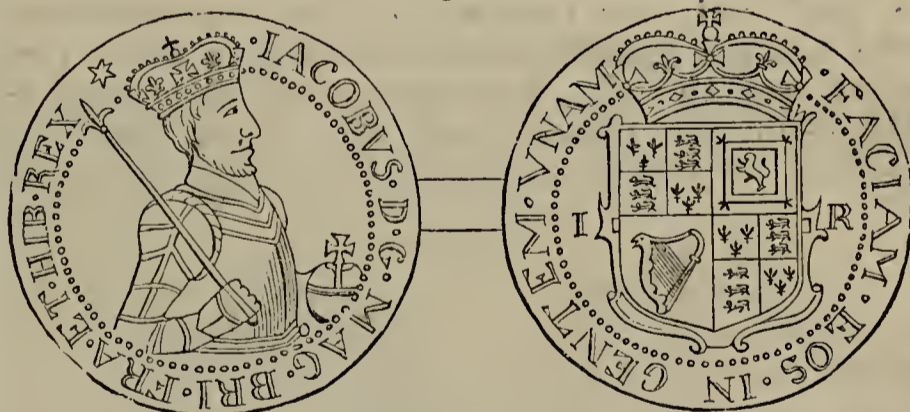
[Sovereign of Henry VII.—Gold, 20s.]

and the double-sovereign of 40s. Henry VIII. added to the gold denominations the crown (Fig. 47) and half-crown; but these coins are only equivalent to the half and quarter-ryal, known since Henry VI., and the term crown appears in the reign of Henry VII. The gold crown of Henry VIII. is, however, remarkable for being a primary coin, and, like all modern hammered money, its tenuity is considerable. This monarch struck sovereigns of 22s. 6d., ryals of 11s. 3d., angels of 7s. 6d., and nobles at their old value of 6s. 8d. In 1546 this prince made silver to gold as one to five, and published sovereigns of 20s. and half-sovereigns of 10s.

Edward VI. found the coin much debased by the arbitrary measures of his father, who in a troy pound had used four ounces of silver and eight ounces of alloy; but bullion being imported from Sweden by Edward VI., good specie was coined, and much of the base metal formerly issued was recalled, so that the coin returned to the old standard in 1551. Till Edward VI. the princes appear on these gold coin at full or three quarter length, but of that monarch only the bust is seen. Sovereigns, on the accession of James I. to the English throne, were called unites (fig. 53), and sometimes sceptre pieces; they were of 20s. value; there were also ryals of 30s., spur ryals of 15s., angels of 10s., and angelets of 5s. The gold crown and half-

crown continued to this king inclusive, and the crown to his successor. The large gold coins of James I.,

Fig. 53.



[Unite of James I.—Gold, 20s.]

Charles I. and II., and James II., were sometimes called Jacobuses and Caroluses. The sovereign, which

Fig. 68.



[Shilling of the Gun Money of James II.]

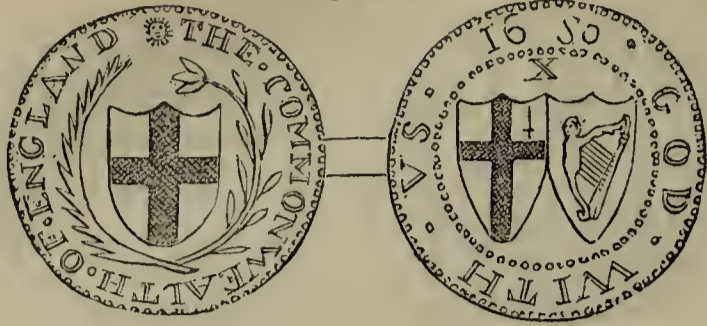
had been likewise termed the broadpiece, sasumed under the Commonwealth, the name of the twenty-shilling piece, bearing, in common with the other Commonwealth pieces, the legend "God with us:"

partie de la susdite primere monoie, currante la piece pursed it oct deners.

"Les queles monoies d'or deivent avoir cours entre tutes maneres des gentz, deinz le dit roialme d'Engleterre," &c.—*Rymer's Fœdera*,

it retained that name till it was supplanted by the guinea. There were also ten shilling (fig. 56) and

Fig. 56.

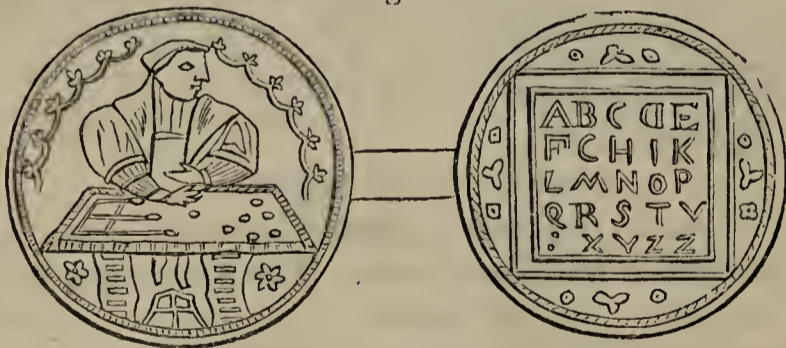


[Ten Shilling Piece of the Commonwealth.—Gold.]

five shilling pieces of gold. Oliver Cromwell struck none but forty shilling and twenty-shilling pieces, and very few even of these, the former being mostly pattern pieces. The guinea, so denominated from the gold of which it was made, being imported from Guinea, was coined in the reign of Charles II. to pass for 20s., but by tacit and universal consent its current value was never less than 21s. This prince also issued half-guineas, double guineas, and five-guinea pieces, which continued to be the usual denominations till towards the close of the reign of George III., when double sovereigns, sovereigns, and half-sovereigns were struck, of the same type as those at present in circulation; the coins larger than the guinea or sovereign were never commonly current. George I. and III. published quarter guineas, but they were found so troublesome, and so liable to be lost from their small size, that they were stopped at the bank in the reign of the latter monarch. A few pieces of seven shillings were coined in the reign of George III., but from their approaching the half-guinea so nearly in size, they were found very inconvenient. In 1696 the guinea rose in value to 30s., but after the grand recoinage of William III., it fell by degrees to 21s. In 1733 all the old gold coins, the unite, the Jacobus, the Carolus, and the broadpiece were called in and their currency forbidden. In the last war the value of guineas varied from 21s. to 30s., and when so many local notes were in circulation, all gold was hoarded, till Sir Robert Peel's bill annihilated the one pound notes, and compelled the gradual resumption of cash payments.

Before leaving this subject, it may be proper to mention the jettons or counters, and the touch, although neither are really to be called coins; the former, which are small and very thin, are generally of copper or brass, but occasionally of silver, or even of gold: they were commonly used for purposes of calculation, in abbeys and other places, where the revenues were complex and of difficult adjustment, and fig. 69 repre-

Fig. 69.



sents a person employed in the arithmetical process with counters. From their being found among the ruins of English abbeys they are usually termed abbey counters. They have been principally coined abroad, particularly at Nuremburgh, (see Snelling's 'Treatise on Jettons') though some few have been struck in England since the reign of Henry VIII. The most ancient bear on both sides crosses, pellets, and globes; the more modern have portraits and dates and heraldic arms on the reverse. The legends are at times religious, and at others *Gardez vous de mescompter*, and the like.

The English touch-pieces generally bear the device

of St. Michael and the Dragon on one side, and a ship on the other—the king, when he touched a person to cure the evil, as it was vainly fancied,

“Hanging a golden stamp about their necks,
Put on with holy prayers.”—SHAKSPEARE.

The ceremony was suspended during hot weather as being “neither safe nor fit;” and in Charles II.'s time during the month of April. On account of persons coming two or three times to obtain the money, it was ordered that the applicants should bring a certificate from the minister and churchwardens that they had not been touched before. The latest of these pieces are of James II., Queen Anne, and the Pretender. The efficiency of the touch of a king in curing diseases appears to be a superstition of very ancient date, for Pliny states that Pyrrhus could cure the spleen with a touch of his foot.

The Mint value of a pound troy of gold is now 46*l.* 14*s.* 6*d.*, the ounce 3*l.* 17*s.* 10½*d.*; and the pound troy of silver is coined into 66 shillings. The weight of coins is now so exact, from the use of the sizing machine, that of 1000 sovereigns there was no variation in 500 from the proper weight.

WEIGHTS OF THE COINS IN CIRCULATION.

	Gold.	Oz.	Dwt.	Grs.
Five Sovereign		1	5	16,370
Double Sovereign		0	10	6,549
Sovereign		0	5	3,274
Half-Sovereign		0	2	13,637
	Silver.			
Crown		0	18	4½
Half-Crown		0	9	2½
Shilling		0	3	15¾
Sixpence		0	1	19¾

Fleetwood's 'Chronicon Preciosum,' second edition; Fosbrooke's 'Encyclopædia of Antiquities;' Pinkerton's 'Coins and Medals;' Folkes' 'Tables of English Silver and Gold Coins;' the 'Archæologia;' 'Companion to the British Almanac, 1828;' Akerman's 'Coins of the Romans relating to Britain;' 'Private Collections of Coins,' &c.

THE CLOCKMAKER'S SALT-WORKS AT GOZA.

THE small island of Goza is situated about four miles to the east of Malta, of which it is a dependency. There is a curious esplanade there, to the west of the hill Zebug, and at the lowest part of a valley leading to the sea. The entrance to it, landwards, is through a long range of rocks, gently declining towards the shore, but stopping abruptly just above it, where the rocks become perpendicular cliffs, standing thirty or forty feet above the level of the water. Some seventy and odd years ago an ingenious clockmaker of Malta, who was proprietor of this rocky esplanade, thought he could derive some advantage from what was otherwise wholly unprofitable, by converting it into a salt-pan, or place where salt might be procured from seawater by evaporation. The intense summer-heat which was concentrated there by the surrounding rocks and hills, promised a rapid process, and he went to work in the hopes of making the sterile spot an El Dorado, but without any notion of the strange results which actually took place. He dug a reservoir, and built a wall along the edge of the precipice to retain the seawater, which it was necessary to spread over a large surface. This done, he busied himself in devising means to raise the water, for to draw it up at the edge of the cliffs was found to be a great waste of labour. After sundry experiments and examinations, he at last discovered that there was a cave or grotto running under the rocky esplanade, which communicated with the sea, and admitted the water to the very point where he wanted it, though it was still some thirty or forty feet beneath the level of his pans. He therefore cut through

the rock that formed the vault or roof of the grotto, and thus made a sort of well through which the sea-water was drawn up. Having spread the briny fluid over a wide surface, he was delighted to find that it diminished in depth with great rapidity, which he attributed solely to evaporation, and the natural effects of the sun's rays. In order to increase his harvest, he kept pouring on more and more sea-water, and this he did until he was thoroughly convinced he should have a thick layer of pure salt. But alas! the water, instead of being evaporated, and leaving its solid brine behind, was absorbed by the spongy rock through which, by filtration, it soon returned to the places from which it had originally been brought, or to the marine grotto and sea beneath, and when the poor clockmaker went to gather his harvest, he found nothing but a coating of mud, the acid of the salt-water having partially dissolved the superficies of the rock on which it had been retained. This was a cruel disappointment, but the enterprising artisan should have remembered the old proverb, and have looked before he leaped: the slightest elementary knowledge of chemistry and geology would have preserved him from this error, which indeed he might have avoided, without any science at all, by making one or two experiments on the rocks, or even by simply observing the natural processes constantly in operation, which would have plainly shown to him that the soft tufo rocks of Malta and Goza are not only excessively porous, but liable to rapid decomposition under sea-water.

The clockmaker fell sick of grief and disappointment, and had a long and dangerous illness. But his misfortunes, and the evil effects of his want of forethought, did not end here. As winter approached, the weather, as usual, became windy, and the sea rough. "One day in particular," says Boisgelin, the historian of Malta, "a terrible storm arose, and the violence of the wind drove the raging waves into the grotto under the salt-works, where the body of water increasing considerably, and being confined in this almost circular cave, acted with a rotatory motion, and formed a syphon or water-spout. There being no passage but the well newly opened by the clockmaker, it there forced its way through with violence, and appeared above like a beautiful wheatsheaf, of so large a circumference as to fill up the whole mouth of the well, and, rising perfectly entire to the height of sixty feet, formed a magnificent aigrette. Its projectile force was so great, that the wind could not act upon it till it had reached the above-mentioned height; when it suddenly separated, and the aqueous particles composing this immense body of water were diffused over the country on all sides to the extent of more than a mile. This violent rain of salt-water destroyed all vegetation, and the cultivated fields, which before had been amply productive, appeared as if they had suffered from fire." Those whose property had been thus devastated—whose grounds had been sown with salt, the extremity and the symbol of desolation in all eastern countries, vented curses against the poor clockmaker in the corrupted Arabic, which is still the language of the inhabitants of Malta and Goza, and with a vehemence and amplification that betrayed their Oriental origin. Not satisfied with this, they brought an action at law against the unfortunate projector, and claimed damages to a large amount. The clockmaker died before the affair was settled, but the mischievous results of his engineering survived him. To prevent further calamities, the people of Goza, whose property was exposed, stopped up the mouth of the well with large stones—an operation which occasioned another phenomenon as extraordinary as the first. "A great quantity of air," says Boisgelin, "was confined by the waves in the bottom of the grotto; which, being rarefied, repulsed the water with such

violence as to cause the most terrible explosions, which not only shook the rock, but the whole of the neighbourhood. The tremendous noise of these different explosions resounded through all the grottoes*, and resembled a discharge of artillery of all sizes quickly succeeding each other. These sounds, being constantly echoed, had the effects of the most violent peals of thunder, particularly when different storms met together. Terror became general; and constant apprehensions were entertained that the rocks would be thrown down, under which this subterranean thunder never ceased to roar when the wind was high. This horrible noise still continues whenever the well is filled up with stones; but when the impetuous waves confined in the cavern have in some degree removed the stones at the bottom of the well, the water acts with the greatest violence upon them, breaking them, reducing them to powder, and driving them back into the sea. The first stones being carried away the others fall of course; and the well once cleared, the wheatsheaf of water forms again, and spreads desolation through the adjacent country."

In the course of a few years this destructive jet d'eau occurred several times; and every time it was seen, or the water was heard roaring and threatening in the cavern beneath, the peasants exclaimed, with sorrow and spite, "There's that unlucky clockmaker again!"

Follies of Fashion.—In no instances have the folly and childishness of a large portion of mankind been more strikingly displayed than in those various, and occasionally very opposite, modes in which they have departed from the standard of nature, and sought distinction even in deformity. Thus, while one race of people [the Chinese] crushes the feet of its children, another flattens their heads between two boards; and while we, in Europe, admire the natural whiteness of the teeth, the Malays file off the enamel and dye them black, for the all-sufficient reason that dog's teeth are white! A New Zealand chief has his distinctive coat-of-arms emblazoned on the skin of his face as well as on his limbs; and an Esquimaux is nothing if he have not bits of stone stuffed through a hole in each cheek. Quite as absurd, and still more mischievous, is the infatuation which, among some Europeans, attaches beauty to that modification of the human figure which resembles the wasp, and compresses the waist until the very ribs have been distorted, and the functions of the vital organs irreparably disordered.—*The Chinese, by J. F. Davis, Esq.*

THE CABBAGE-TREE.

THIS magnificent tree is the *Areca Oleracea* of Linnæus; class *Monœcia*, order *Monadelpia*. It is also known as *Palma Maxima*, and *Palmeto Royal*, which name it has probably received from its great height and the beauty of its graceful waving foliage. It is found as well in the valleys as on the mountains of the West Indies. Its numerous dark-coloured roots have the appearance of so many round thongs; they are of great length, extending some yards into the ground where the nature of the soil is sufficiently sandy or porous to admit of their so doing. The trunk of the tree (which is usually about six or seven inches in diameter) is a little enlarged at the base, from thence it grows straight as an arrow, (particularly when of about thirty years' growth,) gradually tapering to a height, as has been stated, of 300 feet, but this is an exaggeration. Ligon mentions having seen these trees in Barbadoes as high as 200 feet. Bryan Edwards in Jamaica upwards of 150. Bayley in other islands from 70 to 120. Hughes considers the highest in Barbadoes, where they abound more than in the neighbouring

* Small gulfs, caverns, and grottoes, of various forms and sizes, occur almost every moment on the coasts of Malta and Goza. There are many caves close to the clockmaker's.

islands, not to have exceeded 134 feet. The substance of the tree, for about two or three inches in depth, is of a dark colour, and extremely hard and solid; within this is a rather white pith intermingled with small veins of a more ligneous nature. The hue of the bark resembles that of the ash, and is faintly marked at the distance of every four or five inches by the *vestigia* of the branches that have fallen. The appearance of the bark continues the same till within about twenty or thirty feet of the summit of the tree, where it changes to a beautiful deep sea-green, which colour prevails to the top. About five feet above the commencement of this colour, numerous branches encircle the stem, the lowermost spreading horizontally with great regularity, while the superior branches incline wavingly downwards with all the graceful elegance of so many plumes of feathers. The branches, which attain when full grown a length of about fifteen feet, are closely set on the stem alternately rising one above another. Their broad curved sockets completely surround the body of the tree, which is again visible among the upper branches, and is there enveloped in an upright green conic spire, which beautifully terminates its majestic height. On the upper side the branches are slightly grooved and rounded beneath. An immense number of pinnated leaves proceed from the branches, some of which are three feet in length and an inch and a half in breadth, gradually narrowing towards their points, and decreasing in length as they approach the extremities of the branches. The upper side of the leaf is smooth and shining—a strong and prominent rib in the middle of each affords it support on the lower side. It is part of the economy of this tree that the inferior or lower branch drops off monthly, bearing with it an exfoliated circular *lamina* of the green part of the stem; whenever this occurs, the green conic spire which arises from among the superior branches, partially bursts and sends forth a young branch, which remains the uppermost till the same process is again renewed, so that the spire, the common parent of all, thus continually supplies the loss of the lower branches, and the beauty of the tree remains undiminished. The green-coloured part of the stem differs not only in hue but in substance from that of the other part, as it is formed of several *laminae* or separate layers of a tough bark of a like nature, about a quarter of an inch in thickness, which are arranged closely over each other. All the branches, as they successively grow to be old, are united by the broad socket of the footstalk to this outer *lamina* or layer; some time before the lower branch is quite withered, the green circular layer, which before appeared a solid part of the tree, divides vertically, preparatory to its falling off with the branch to which it is strongly attached, leaving the next succeeding layer apparently a constituent part of the tree. The first, second, third, and sometimes the fourth of these *laminae* are green on the exterior and white within. The remainder of them have the outer side of a bright lemon colour, and the interior white. The part called the cabbage consists of the inner snow-white flakes, which contain a considerable portion of oil; they have something the flavour of an almond, and are esteemed a sweet and agreeable esculent; they are eaten raw, fried, or boiled, and, when they have undergone the latter process, are not unlike cabbage.

It is a well-known fact that cutting the cabbage destroys the tree, which may be the growth of half a century. The cabbage is consequently a dish principally seen at entertainments, and two negroes are usually dispatched to the mountains where these trees abound to cut what are required. The blossom displays itself at that part of the stem of the tree where the two colours unite. On its first appearance it is a husky *spatha*, growing to a length of about twenty inches, which is full of small white stringy filaments, with alternate protuberant

knobs, not unlike a fringe of coarse white knotted thread; farinaceous yellow seed in embryo, resembling fine saw-dust, is abundantly dispersed among the filaments, which, after they are cleared of this dust, are converted into an excellent pickle. If the *spatha* is not cut young for this purpose, when ripe it bursts, and the filaments become ligneous with a bushy growth, consisting of many small leaves, which produce a considerable number of small oval thin-shelled nuts, about the size of unhusked coffee berries. The soft part of the leaves of this tree being removed, the inside texture is spun in the same manner as hemp or flax, and is used for cordage, fishing-nets, and things where strength is desirable. From the hard outside of the stem, laths for houses are cut, which are of great durability, and this wood is also applied to other useful purposes. Hughes ('Natural History of Barbadoes') states that when the trees are felled, or fall by the violence of the hurricanes, a species of grub breeds in the soft part of the trunk, which are about the size and length of the first joints of the thumb, and are eaten and esteemed a delicate morsel by the French of the neighbouring islands.

The cabbage-tree must be familiar to most readers, from the allusions to it in the tale of 'Paul and Virginia.'



[The Cabbage-Tree.]

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ON THE HORNED PHEASANTS OF THE HIGH MOUNTAINS OF INDIA.



[The Horned Pheasant.]

THE pheasants (*phasianidæ*) form one of the most interesting groups of the feathered race, whatever be the point of view in which we contemplate them. Their beauty of form and the splendour of their hues have attracted universal admiration. Many dazzle by the metallic lustre of their plumage, which gleams with green, and blue, and gold. Such, for example, is the case with that gorgeous bird the Impeyan pheasant (*Lophophorus Impeyanus*) of the Himalayan Mountains, which it has several times been attempted to bring alive into this country, but hitherto without success. Others, as the golden pheasant of China (*phasianus pictus*), delight us with the richness and multiplicity of their tints, which contrast admirably with each other. The common pheasant, now naturalized over the greater portion of Europe, is exceedingly beautiful, but it is far surpassed by many of its congeners, of which we may mention that elegant Chinese species the *Phasianus Reevesii* (*P. venesatus*, Temm.), of which a fine specimen adorns the Gardens of the Zoological Society. It is to be observed, however, that this beauty of plumage is confined to the males; the females are universally attired in a sober dress of brown, often indeed exquisitely pencilled with spots and zigzag

lines, but totally destitute of the brilliant hues which glisten in their mates. Independently, however, of the beauty of the pheasant tribe, there is another point of interest which cannot be overlooked—we allude to their value as it respects the table. The flesh of all the gallinaceous birds affords to man a wholesome and nutritious food, and that of the pheasants is deservedly in high estimation. Hence the introduction and naturalization of the common pheasant in western Europe is a positive good, and it is desirable therefore to add other species to the list of those which are acclimated with us.

The pheasants (family *Phasianidæ*) are all natives of Asia. The common pheasant was originally brought from the river Phasis by the Greeks in some of their earlier expeditions; that of the Argonauts under Jason has the popular credit of having introduced it. However this may be, the name given to the bird by the Greeks (*φασιανος*, in Latin *Phasianus*) of which all our modern European names for it are merely corruptions, points to the banks of the Phasis as the place from which it was derived; and to the present day the pheasants of Mingrelia (the Colchis of the ancients) are celebrated for their beauty and size. Extreme

brilliancy of plumage is in general the characteristic of birds dwelling in torrid regions beneath a glowing sky; such is not the case as it regards the most gorgeous and beautiful of the pheasant tribe. On the contrary, the high mountains of the Himalaya, bordering upon the limits of perpetual snow, are tenanted by the most splendid of this family. The Impeyan pheasant is an example in point: adapted for regions where the temperature is at the most only moderate, and often at a low degree, this noble bird soon dies when taken from its alpine home into the burning lowlands of India; and hence arises one of the difficulties in the way of our obtaining living specimens in Europe. But besides the Impeyan pheasant, the Himalaya chain of mountains presents us with a group or genus of this family, containing a very limited number of species remarkable both for their great beauty and their characters, which indicate an affinity to the turkeys, between which group and that of the genuine pheasants, they constitute an intermediate link. The genus to which we allude is that termed *Tragopan*, (Cuvier,) of which three species only are known. They are easily distinguishable from all the rest of the *Phasianidæ* (at least as far as regards the male birds) by the presence of large throat-wattles, or naked carunculated flaps of skin, (resembling those of the turkey,) which extend from the naked cheeks, spread over the throat, and proceed down each side of the neck, while from behind each eye rises a soft fleshy horn. The whole of these appendages are capable of being contracted and dilated at pleasure, or at least in accordance with the emotions of anger, fear, &c., as we see in the male turkey: the tints of the horns and wattles are rich purple, mingled with scarlet, and are most probably changeable from one hue to another. The tail is broad and rounded, and the plumage is dotted with round spots of white on a brown or red ground, the effect of which is very pleasing.

Of the three species that are known at present, two have been but recently introduced to science, nor, indeed, is our acquaintance with the one first described of distant date. The first species is the horned pheasant of Nepâl (*Tragopan satyrus*). It was first described and figured by Edwards, in the third volume of his 'Natural History of Birds,' p. 116;—partly from a drawing sent from India to Dr. Mead, and partly from a head of the bird preserved in spirits which accompanied the drawing. Edwards's third volume is dated 1750, and his plate was etched in 1749, as appears by the date inscribed in the corner. The alliance of this bird to the turkey was not unobserved by this writer, who in his catalogue places it among that group, while in his account of it he observes that it is, "for shape of body and proportion of parts, pretty much like a turkey, and may be ranged with fowls of the poultry kind." Dr. Latham, in his 'General History of Birds,' states that these birds, though by no means common, "are not unfrequent in drawings done in India; and are particularly well figured in those of Mr. Middleton and Lady Impey." * * * "In the drawings of Sir J. Anstruther it is said to inhabit the snowy regions of Thibet." Its size is between that of a fowl and turkey. It is beautifully figured in Gould's 'Century of Birds.'

The second species is from Thibet and the Chinese borders, and was first described and figured in the 'Indian Zoology,' by Mr. Gray, under the title of *Tragopan Temminckii*. Of this species, as rare as it is beautiful, a living specimen, presented by J. R. Reeves, Esq., is now in the Gardens of the Zoological Society, and constitutes, as far as we are aware, the first example of one of the present group having reached our shores alive and in health. It was procured in China.

The third species is from the northern range of the

Himalaya, and was first illustrated in Mr. Gould's 'Century,' under the name of *Tragopan Hastingsii*, the figures are those of an adult and young male, and adult female. In size this species rather exceeds the *Tragopan satyrus*, its total length being twenty-three inches. The head of the adult male is covered with a pendent crest of feathers, which, together with the ear-coverts and the throat, are black; the neck and shoulders are rich maroon; the chest, fine orange red; the naked skin round the eyes is scarlet; the wattles and horns, purple, tinted here and there with scarlet. The upper parts exhibit a mixture of zigzag lines, and marks of dark and light brown, forming a ground on which are scattered numerous distinct spots of white. The feathers of the under surface are maroon, bordered with black, and having each a large central spot of white. The young male is less brilliant, and the wattles are but little developed.

The plumage of the female consists of an uniform brown, mottled, barred, and dashed irregularly with dark brown and dull fawn colour; the cheeks are clothed with feathers, and the head is slightly crested: there are neither horns nor pendent wattles.

Beautiful preserved specimens of the *T. satyrus* and of the *T. Hastingsii* are in the Museum of the Zoological Society, while the *T. Temminckii*, as we have said, is living in the menagerie.

Of the habits and manners of these noble birds in a state of nature little is accurately known. The strength of their legs (*tarsi*), which are clothed with large scales, and in the males armed with a short sharp spur, together with the rounded form of the wings, indicate them to be chiefly terrestrial. The bill is strong and large, but wants that spoonlike form of the tip of the upper mandible, so conspicuous in the Impeyan pheasant (*Lophophorus Impeyanus*), by which it is adapted for the scooping up of bulbous roots, on which that bird is known to feed. Most probably the diet of the present group consists, as in others of the *rasorial order*, of grains, roots, and the larvæ of ants and various insects.

Could the horned pheasants, or the refulgent Impeyan pheasant, be imported in sufficient numbers into our island (and we trust this will be soon accomplished), there is little doubt but that they might, with proper management, become naturalized. There is nothing to fear with regard to cold. They are the natives of a cold or temperate region;—they verge upon the line of perpetual snow;—so that the wooded hills of our portion of the globe would not be very uncongenial to their constitution. Nor would there be much difficulty in providing them with suitable food. Grain forms the staple diet of all the gallinaceous tribe;—hence the peacock of India, the guinea-fowl of Africa, the common pheasant of Asia, the turkey of America, have equally become naturalized and have multiplied in our western regions—to say nothing of the common fowl, the origin of which (the jungle fowl) is from India, but which, from time immemorial, has been reclaimed or domesticated, and has long since spread in this condition over the greatest portion of the globe. Thus the food of the gallinaceous tribe, and the hardness of their constitution, fit most of them, at least, for a very extensive diffusion throughout the globe; and in this we may discern a wise arrangement of nature, inasmuch, as of all the feathered race, they are the most valuable to man, and are at once ornaments around his dwelling and wholesome delicacies on his table. If to our poultry-yard could be added the horned pheasants, so closely allied to them in form, habits, and general manners, they would constitute a most important acquisition, and produce a full reward for the trouble bestowed in their naturalization.

SHOOTING STARS.

THE French Board of Longitude issues every year a publication similar, in many respects, to the 'Nautical Almanac' published in this country; but the French 'Annuaire,' in addition to the astronomical and statistical tables which it publishes, contains notices which, though of a scientific character, may be perused with interest by the general reader. The popular portion of the work for several years has been written by M. Arago. We translate the following observations on shooting stars from the 'Annuaire' of 1836:—

These phenomena, which have often been considered unworthy of investigation, and regarded simply as atmospheric meteors originating in the inflammation of a quantity of hydrogen gas, have, in consequence of recent observations, become objects of greater attention among men of science. Previous theories limited their place in the heavens to our own atmosphere; but from observations made at Breslau, and other places, by Professor Brandes and several of his pupils, the height of some shooting stars has been calculated at 500 English miles; and the rate at which they move not less than thirty-six miles in a second, which is nearly double the rate of the earth's motion round the sun. If a reduction be made to one-half of this rate per second, in order to allow for the illusion occasioned by the motion of the earth, the real motion would be eighteen miles per second, which, with the exception of the earth, would still be more rapid than that of any of the principal bodies of our system. In the attempts which have been made to ascertain the apparent direction in which shooting stars usually move, it has been ascertained, that although they become ignited in our atmosphere, they come from beyond it. It is singular that their general direction should be contrary to that in which the earth moves in its annual orbit; and it is much to be desired that the inferences already deduced should be corrected or confirmed by a greater number of observations. We think that the officers of the watch on board the *Bonite**, should be invited, during their voyage of discovery, to note the hour of the appearance of each shooting star, its angular height above the horizon, and especially the direction in which it moves. In referring these meteors to the principal stars of the constellations which they traverse, the different questions here raised can be easily settled.

The means of accounting for the extraordinary appearance of luminous projectiles observed in America in the night of November 12th and 13th, 1833, are not very satisfactory, unless it be assumed that, besides the planetary bodies which revolve round the sun, there are myriads of smaller bodies which only become visible at the moment when they come within our atmosphere and assume a meteoric appearance; and that these asteroïdes (to use the term which Herschel formerly applied to Ceres, Pallas, Juno, and Vesta) move in groups; and that they move singly also. A careful observation of shooting stars is the only means of enlightening us on this curious subject.

The shooting stars in America, to which allusion has been made, were observed in 1833. They succeeded each other at such short intervals that it was impossible to count them; and the most moderate calculations fixed their number at *hundreds of thousands*. They were so numerous, and showed themselves in so many quarters of the heavens at the same time, that the attempts to estimate them were only rough guesses. At the Observatory at Boston their number was considered to equal one-half of the flakes which fill the air in an ordinary fall of snow. When their numbers were diminishing, 650 stars were counted in fifteen minutes, in a circumscribed part of the heavens, which did not comprise a tenth part of the visible horizon; and these did not amount to more than two-thirds of

* A French vessel on a voyage of discovery.

the whole number seen, which was at least 866; and if the whole hemisphere could have been surveyed by one observer, the number seen would have been 8660, or 36,640 per hour. As the phenomena continued more than seven hours, the number of shooting stars visible at Boston was upwards of 240,000; and it should be recollected that the basis of this calculation was taken when the intensity of the phenomenon was diminishing. It was visible along the whole of the eastern coast of North America, from the Gulf of Mexico to Halifax, from nine o'clock in the evening to sunrise, and in some places in full daylight, at eight o'clock in the morning. All these meteors came from the same point of the heavens, viz. γ of Leo, and those which were seen elsewhere was the effect of the earth's movement which caused an apparent alteration in the position of this star. The above facts are certainly very curious, but the following are not less so.

The shooting stars observed in the United States appeared in the night of the 12th and 13th of November. In 1799 a similar phenomenon was observed in America by M. de Humboldt, in Greenland by the Moravian Brethren, and in Germany by various individuals; and the period of its appearance was also the night of the 12th and 13th of November. In 1832, in Europe and some parts of Asia the phenomenon was witnessed; and the date was still the night of the 12th and 13th of November. This identity of dates induces us to urge upon our young seamen the task of observing with attention the appearances in the firmament between the 10th and 15th of November. Since my report has been read to the Academy, M. Berard, one of the most intelligent officers of the French marine, has favoured me with the subjoined extract from the journal of the brig *Loiret*, which he commands:—"The 13th of November, 1831, at four o'clock in the morning, the sky being perfectly cloudless, and a copious dew falling, we have seen a number of shooting stars and luminous meteors of great dimensions. During upwards of three hours more than two per minute were seen. One of these meteors, which appeared in the zenith, left an immense train from east to west like a luminous band, and in it many of the colours of the rainbow were distinctly visible; its breadth was equal to one-half of the moon's diameter, and the light which it gave did not disappear for six minutes. We were on the coast of Spain near Carthage."

On the 13th of November, 1835, a large and brilliant meteor fell near Belley, in the department of the Ain, and set fire to a farm-yard. In the same night of the 13th of November a shooting star, larger and more brilliant than Jupiter, was observed at Lille by M. Delezenne. It left on its passage a shower of sparks precisely similar to those which follow a sky-rocket.

The facts we have now given confirm more and more the existence of a zone composed of myriads of small bodies, whose orbits come within the limits of the earth's ecliptic every year between the 11th and 13th of November. This is a new planetary world which begins to open to us. It is almost unnecessary to state how highly important it is to ascertain if other masses of asteroïdes do not come within the earth's ecliptic at other points than that which it reaches about the 12th of November. It is desirable to make observations between the 20th and 24th of April, as well as in November; for in 1803, on the 22nd of April, I believe, from one o'clock in the morning until three, shooting stars were seen in all directions in such great numbers, in Virginia and Massachusetts, as to be compared to a shower of sky-rockets. Messier states that on the 17th of June, 1777, towards noon, he saw in the space of five minutes a very large number of black globules pass over the sun's disc. Were not these globules also asteroïdes?

TOMB OF VIRGIL.



[Virgil's Tomb.]

THIS ancient Roman tomb is situated on the hill of Posilippo, at a short distance from Naples. On leaving that city by its western suburb La Chiaja, a walk of a few minutes brings the tourist to a detached quarter called La Mergellina, where he quits the shore of the beautiful bay, and turning to the right ascends the vine-covered hill of Posilippo by a very steep and winding road. About midway up the hill, a rustic gate admits him into a vineyard and garden, which terminate in one direction at the edge of a steep cliff. On the very brink of this precipice, and immediately above the entrance to the subterranean road or tunnel of Posilippo, stands the ruined tomb of Virgil, overshadowed by trees that have their roots in some rocks that flank it. The tomb is a small square building, with a rounded roof, having little to distinguish it from the ancient edifices of the same kind that abound in the neighbourhood, except its name and the singularity of its position. The old entrance has been enlarged, and there is a modern window cut through the wall which admits of a curious view of the chasm that forms the approach to the tunnel, or, as it is called in the country, the grotto of Posilippo. Internally this tomb is a vaulted cell about twelve feet square, having many *columbaria*, or small recesses in the side walls made to receive urns. No urns, however, nor vestiges of them, no sarcophagus, nor any inscription (really ancient) remain here, nor are the stories told of the preservation until the 16th century, and then the removal of the very urn that contained the great poet's ashes, at all satisfactory. According to one account, the urn, standing in the middle of the sepulchre, supported by nine small marble pillars, with an inscription on the frieze, was here as late as 1526, and frequently visited by the lovers of letters; but, it is added, that in the course of the wars and invasions of the kingdom that soon fol-

lowed, the Neapolitan government fearing such precious relics should be carried off or destroyed, caused them to be removed from the tomb to the fortress called Castel Nuovo, where they were lost. Another statement is, that at the earnest suit of the Cardinal of Mantua, who was anxious to enrich with the poet's remains the city where the poet was born, the government gave the urn, the pillars, and some small statues that had stood in the tomb, to the Mantuans, and that the cardinal on his way home with them fell sick and died at Genoa, upon which the treasures were scattered and lost there. Another account again is, that the monks of the neighbouring Convent of Mergellina removed the urn and its accessories from the tomb, and that they, and not the government, made a present of them to the Cardinal of Mantua, on whose sudden death at Genoa they were lost. The epitaph reported to have been inscribed on the urn is the well-known distich,

Mantua me genuit, Calabri rapuere, tenet nunc
Parthenope: cecini pascua, rura, duces.

Mr. Eustace* says that these very lines are inscribed on a marble slab placed on the side of the rock opposite the entrance of the tomb; but the fact is, though there is an inscription there, rudely cut in coarse marble, the words are very different and much more barbarous, being

Qui Cineres? Tumuli hæc vestigia conditur olim
Ille hoc qui cecinit pascua, rura, duces.
Can. Reg. M.D.LIII.

Many writers have carried their scepticism so far as not only to doubt the story of the urn, the ashes, and the inscription, but to deny that this is the tomb of Virgil at all; while, on the other hand, the honours of the

* 'Classical Tour in Italy.'

place have been most warmly contended for. There is nothing like a positive proof on either side, but the arguments to show whether the poet's tomb was situated here, or some miles off, on the other side of the bay, seem to be pretty equally balanced, or, if anything, rather to incline in favour of this romantic spot, which has now been visited for centuries by innumerable travellers of all nations, by kings, princes, and poets, who have found pleasure in believing the local tradition.

George Sandys, an English traveller who visited the tomb about 220 years ago, thus describes its external appearance:—"It is in form of a little oratory, which the ivy and myrtle do clothe with their natural tapestry; and, which is to be wondered at (if it grew, as they say, of itself), a laurel thrusteth out her branches at the top of the ruined cupola, to honour him dead that merited it living*." The laurel, which is frequently mentioned at a much later date as wholly covering the tomb with its luxuriant branches, has long since disappeared; but the rest of Sandys's description remains correct to this day. The myrtles still flourish on the roof, and all around that quiet nook, filling the air with sweetness; and the ivy not only decorates the tomb, but the sides of the rocks and the face of the cliff on which the tomb stands.

NORWEGIAN PEASANTRY.

THE poor and mountainous country of Norway was formerly an independent kingdom, governed at first by elective, and then by its own hereditary, sovereigns. It is not our present purpose to go into the particulars of Norwegian history, or to describe those times when the Norsemen, superior to us both in the arts of war and peace, were lords of the northern seas, and the frequent and successful invaders of our coasts. We merely propose to relate the great political changes which have taken place in the ages that come within the limits of authenticated history, and this may be done in a very few words. In the year 1319 Hagen V. dying without male issue, his grandson in the female line, Magnus Smek, united the kingdom of Norway to that of Sweden, and reigned over both. Magnus was succeeded on the throne of Norway by his son Hagen VI., husband of the celebrated Queen Margaret; and at his death, in 1380, Norway was united to Denmark by their son Olof V. This Olof, dying without children, was succeeded by his mother Margaret, who was raised to the throne by the unanimous suffrages of the Norwegians. On her death the crown of Norway, with those of Sweden and Denmark, fell to her nephew Eric of Pomerania. On this union of three states under one sceptre, the Danes asserted and gradually obtained a superiority of power over the other two, and this they carried to a tyrannical extent in the comparatively flat and defenceless country of Sweden, whilst in Norway the mountain fastnesses of the country, and the well-known resolute character of the people, probably rendered them more moderate and circumspect. The great Gustavus Vasa, by his valour and address, and after a succession of romantic adventures and "hair-breath 'scapes," succeeded in making Sweden wholly independent of Denmark, and ascended a throne he deserved in 1521. The Norwegians, however, continued united with the Danes under the rule of princes whose dynasty was native to both countries, and who allowed the hardy mountaineers to administer their own affairs, and enjoy all their ancient liberties and privileges. This union subsisted until 1814, when, by the high award of the Congress of Vienna, and con-

trary to the inclination of the mass of the people, Norway was taken from Denmark and joined to Sweden.

Among the old privileges of the Norwegians was that invaluable one of voting their own taxes and contributions to the state; and this was done in a public assembly of the landed proprietors, farmers, and peasants: among their liberties, and the most precious of them all, was the exemption of the peasantry from villainage or slavery. Whilst in the adjoining country of Denmark the peasants, even to our own times, were to all intents and purposes serfs, and sold or transferred with the estates they were born on, Norway was blessed with a particular code called the *Norway Law*, compiled by Grieffefeld, at the command of Christian V., the great legislator of his country, who reigned from 1670 to 1699. By this law, which confirmed some ancient usages and aspirations, and extended and defined others as rights, all the peasants, with the exception of a few on certain noble estates near Fredericstadt, were declared to be free. The designs of the legislator and the spirit of this law extended even to the few serfs excepted; for unless the noble proprietors of those privileged estates fulfilled certain conditions which became more and more difficult with the progress of time, they lost their privileges, and their peasants became free like the rest. Though of the same race, religion, and language as the Danes, this emancipation, aided no doubt by that more independent bearing always found among mountaineers, produced a wonderful difference between Norwegians and Danes.

The late Archdeacon Coxe, who travelled through both countries about half a century ago, and some time before the emancipation of the Danish peasantry, says, "The benefits of the *Norway Law* are so visible in its general effects on the happiness and in the appearance of the peasants, that a traveller must be blind who does not instantly perceive the difference between the free peasants of Norway and the enslaved vassals of Denmark, though both living under the same government." When the late amiable and excellent Bishop Heber was in the country (in 1805), every trace of vassalage had disappeared. "The peasants," says he in his *Journal*, "are totally and entirely free. * * * There has been no hereditary nobility in Norway since their extirpation by Christian: the wealthy families are either peasants grown rich or merchants from other countries, who have purchased the estates of the ancient possessors*." In the larger towns and on the southern coasts, which are more frequented by foreigners and sailors, the case is somewhat different; but in the interior of Norway, and on the northern coasts, there reigns a simplicity, a primitiveness of manners scarcely to be found in any other part of Europe.

The hearty frankness and freedom from ceremony and restraint of all classes are at first quite startling to an Englishman. Bishop Heber tells us that the postilions or drivers along the road always shook him and his companion by the hand at parting, were very talkative and lively, and addressed them with great frankness and familiarity, some of them giving the two Englishmen, "out of pure good will, tolerably sound thwacks on the back and shoulders;" and Mr. Henry Twining, who has just published an interesting account of a tour he made in Norway in 1834†, assures us that this frankness and good-will are not at all on the decline, his hand being wrung in the same manner at every post-house until it ached again!

* *Journal of a Tour in Norway, Sweden, &c.*, published in Bishop Heber's *Life*, by his Widow.

† *Voyage en Norwège et en Suède*, par Henri Twining. Paris, 1836. Though written in French this is the production of a young Englishman.

* 'Relation of a Journey begun A.D. 1610, &c.'

Though living in very small communities, far apart from each other, scattered over a wild mountainous country, cut by long fiords, or arms of the sea, and intersected by deep rivers and stormy lakes, the poor Norwegians contrive to secure very generally the advantages of education and religious instruction. Both of these, indeed, are provided for by the wholesome laws of the country. The schoolmaster of each district makes a regular progress from village to village, from farm-house to farm-house, having, at times, to go a distance of fifty miles at a stretch, and this in the midst of the rigours of winter, and through frost and snow, the peasantry being too much occupied during their short spring, summer, and autumn, (which seasons, taken altogether, scarcely exceed four months of the year,) to be able then to devote any time to in-door application. The schoolmaster receives his food and lodging from the principal farmers of the district, and all the inhabitants who cannot read are obliged by law to go to him for instruction: the master receives a trifling fee—some two or three stivers—from each pupil; and his whole income, putting aside his meat and lodging, which he gets gratis during his journeys, rarely exceeds thirty or forty dollars the year. These honest dominies, however, are welcome wherever they go, and seem generally to lead a very contented life. In some of the remote districts, they not only carry the light of education, but all the news current in those thinly-peopled tranquil regions; and their arrival at a farm or village is looked upon as an event, and held as a holiday. The country clergymen are as locomotive as the schoolmasters. As very few of the villages are large enough to support a church of its own, this place of worship is generally built quite by itself, in an open solitary plain or hill-side, so as to be about equidistant from several villages and farms, the inhabitants of which meet there, as at a central point, on the Sabbath. There is sometimes a parsonage-house attached to the church, but more commonly the clergyman lives in one of the villages, and has to make a journey of some miles to perform service. In addition to this, he is bound to visit his parishioners, going from village to village, over moors and mountains, across fiords and rivers; and once a year he must examine all the children in reading and writing, and give in a statement of their progress to the bishop. In the northern parts of Norway, among the dreary islands scattered about the North Cape, the life led by one of these servants of the church is one of almost constant danger and privation—as far removed as well can be from a life of luxury, indolence, and ease. His habitation is a hovel, on a small desert rock, washed by the polar seas, and swept by the most tempestuous and coldest of winds. In a small vessel, he has to go from one of these inhospitable isles to another, to preach and to instruct. His food, without vegetables of any kind, and often without even rye-bread, is salted fish, the only article the poor islanders can afford in abundance. Von Buch, a German traveller, who visited these dreary regions in 1807, describes an ecclesiastical residence of the sort, close to the Cape, the northern extremity of Europe, which he not unaptly calls the dreary end of the world. “There,” he says, “lay Kielvig, in a bay, consisting of the church, the parsonage, and four or five houses belonging to the merchant and his fishermen. No more people live here, and they could scarcely do so, for we go over the whole ground on which a house could possibly stand, in a few seconds: it is a narrow space, between the waves and the rocks, covered with perpetual snow. Who could have had the heart and courage first to build here?*” On in-

quiry, Von Buch found that the parsonage was unoccupied, the clergyman having been obliged by sickness to change his residence to Porsangerfiord, where some little vegetation—some few herbs and birch-bushes—mitigated the effects of the scorbutic winter. Three of his predecessors had died at Kielvig of the scurvy within a year. From the main land the poor minister descended the fiord, or deep narrow bay, every Sunday in a boat, and then crossed over to the church at Kielvig. This is said to be the last and most northern church in existence; it lies in latitude 71° within a few miles of the Cape.

The clergy are encouraged in the zealous discharge of their duties by the bishop, who visits them every year, and shares in their privations and dangers. Sir Arthur de Capell Brooke met the bishop of this vast diocese at Kobberdal, in the year 1816. “I found,” says our traveller, “in the worthy prelate a sensible and well-informed man, stout, hale, and active, and in appearance between fifty and sixty years of age. He was then returning from a distant part of his diocese, which is probably the largest, and certainly the most northern, in the world, extending, as he informed me, from Nummedal’s Island, between the latitude of 64° and 65° , to the Northern Cape, in that of $71^{\circ} 10' 15''$. He has every year nearly 750 miles to travel in his visitations, which must require no inconsiderable exertions, and can be performed only in boats*.” When they parted, each to continue his voyage, the good bishop, equipped with a pair of good high sea-boots, and followed by his dean, who accompanied him in his marine visitations, stepped nimbly into his boat, and bidding the English traveller farewell, remarked that it would be the last time of their meeting in this world.” By exertions like these the Norwegian Church is the benefactor of mankind, maintaining an advanced state of civilization within the polar regions, and comforting and raising immortal hopes in men whose life in this world is almost a perpetual struggle with dangers and difficulties. In consequence of this, we find that the clergy are very much respected all over Norway. Over a certain number of clergymen there is a provost, elected by themselves, whose functions nearly correspond with those of the rural deans in England.

In some parts of the continent, particularly in southern Norway, the valleys are beautiful and fertile, and wheat is raised in considerable quantities. But these happy regions bear a small proportion to the whole, and it is rarely that the peasants can afford to eat wheaten bread. Their general food is rye bread and milk, cheese, and dried or salted fish. The common rye bread, either from the way in which it is made, or from the great heat of the weather during summer, has a sour unpleasant taste; but there is another kind of bread, called *flad bröd*, in pretty general use, which is more agreeable to the palate. The rye-flour, or the oatmeal (for it is made sometimes of the one and sometimes of the other), being mixed simply with water, is well kneaded, and then rolled out into circular shapes like our pancakes; but considerably larger, being about two feet in diameter and much thinner. As fast as one female makes these cakes, another takes them and lays them on a large round plate of iron (the girdle of the Scotch), which is heated and placed over a good fire; they only require once turning, and are well baked in a minute. Prepared in this manner, the bread, or rather biscuit, is very crisp and agreeable; and the coarse taste of the rye is entirely removed. It will keep good and retain its nutritious qualities for years. In the northern parts of Norway it is the only bread to be met with. Mr.

* ‘Travels through Norway and Lapland,’ by Leopold Von Buch, Member of the Royal Academy of Sciences at Berlin, &c.

* ‘Travels through Sweden, Norway, and Finmark, to the North Cape.’

Twining says he fancies that two women will make in two or three hours *flad bröd* enough to last a family as many weeks; but the peasants do not bake at such close intervals; they generally make bread enough at one baking to serve them for three or four months. Archdeacon Coxe was informed, that they could bake in a single day *flad bröd* enough to supply a family for a whole year. The rye loaves are frequently so hard as to require something like a hatchet to cut them. Slices are put into a dish of sour milk, and so softened and eaten. In a rustic establishment a baking-day is a sort of *jour de fête*, or holiday; and they generally brew at the same time. Their brewing is very simple; it consists merely in an infusion of barley, and the young and tender shoots of the juniper-tree, in hot water, which produces a beverage which is weak, but rather pleasant to the taste. This is called *drieka*. It is only in the towns that they brew *oel*, a beverage which resembles our ale in quality as well as name. In times of scarcity, which, owing to the improvements made in agriculture, occur less frequently than formerly, the peasants made a bread of the bark of trees, generally of the fir. This bark is dried before the fire, ground to powder, mixed with a little rye or oatmeal, baked, and eaten like bread; it is bitter, and affords but little nourishment. The cultivation of the potato was introduced towards the end of the last century, but in a country where the summer is so short these roots do not grow to any size. Mr. Twining says, that on the rare occasions he saw potatoes used as food by the peasants they were eaten raw, and were of a bad quality. As a particular luxury the peasants eat their *sharke*, which are thin slices of meat sprinkled with salt, and dried in the wind like hung-beef; but this indulgence in animal food is very rare indeed. A commoner treat on high days and holidays consists of a thick hasty-pudding, or porridge of oatmeal or rye meal, seasoned by two or three pickled herrings or salted mackerel.

All the travellers we have consulted for these short notes agree in representing the people as thriving on this apparently poor fare; and in no part of the world, in proportion to its population, are there more instances of extreme longevity than in Norway. "Notwithstanding the poor fare of the inhabitants," says De Capell Brooke, "they are remarkably robust and healthy. Though in many parts animal food is quite unknown to them, they are generally tall and good-looking, with a manly openness of manner and countenance, which increased the farther north I proceeded. From this hardy way of living, and being daily accustomed to climb the mountains, they may be said to be in a constant state of training; and their activity in consequence is so great, that they keep up with ease by the side of your carriage, at full speed, for the distance of ten or twelve miles. Their consideration for their horses is such, that I never remember seeing them, except perhaps for a few minutes, rest themselves behind the carriage; and in this way will they continue running to the end of the stage." In some parts of the country, as in Norland, and about Drontheim, they procure a good and wholesome vinegar in a curious manner. A large species of black ant, that makes hills almost as large as a Laplander's hut, abounds there. The peasants plunge a vessel, or bottle, half filled with water, into these hills; the ants, creeping into the bottle, are drowned, and thus taken in prodigious numbers. They then boil the ants in water, and a strong acid is thus produced, which is used as vinegar. One disagreeable effect of their dry, salt, heating diet is, however, seen in the cutaneous disorders which are rather common in some districts.

[To be continued.]

HINTS AND CAUTIONS IN THE PURSUIT OF KNOWLEDGE.

THE following sensible remarks are taken, with some abridgment, from an excellent little book, published under the above title, by Mr. Bullar of Southampton:—

"*Knowledge* is not necessarily *wisdom*. An admirable poet has thus instructively marked the difference between them—

' Knowledge and wisdom, far from being one,
Have oft-times no connexion. Knowledge dwells
In heads replete with thoughts of other men,
Wisdom in minds attentive to their own.
Knowledge, a rude unprofitable mass,
The mere materials with which wisdom builds,
Till smoothed and squared and fitted to its place,
Does but encumber whom it seems to enrich.
Knowledge is proud that he has learned so much,
Wisdom is humble that he knows no more.'

"But some are ready to say: 'Well now, after all these cautions, what should we be advised to read?' This question may be answered very generally.

"I. Read what will make you well acquainted with your own country;—its divisions,—its natural productions,—its arts,—its commerce. Acquire a habit of observing every thing that you have to do with. Where does this come from? How is this made? When was this invented? Where did this grow? How came this to be thought of? Ask for books that will teach you these things. You will soon be convinced that 'it requires to know a good deal in order to understand a little.'

"II. Extend your views to the geography of the world. Good maps may be had at a cheap rate. It is both entertaining and instructive to lay a map before one; and then, from a well-chosen book, to trace the different countries, to inquire into their various climates and productions, to examine, to compare, to contrast, to classify, the governments, the superstitions, the manners, the customs, of the diversified multitudes of mankind; as well as to observe those natural wonders by which the wisdom and goodness of the Great Author of all things are everywhere made manifest.

"III. Read the history of your own country. Begin with some short outline, to give you a general view. Then fill it up, by reading on these parts on which more particular information may seem desirable. Living as we do, through the kind providence of God, under a free constitution, it is the duty of every man to get some clear information respecting that constitution. In this town, the general right of voting for the choice of members of Parliament makes it an especial obligation that you should inform yourselves as to what you ought to do, that you may not fail in your duty to yourselves, your children, your country, and your God. The history of our own country is a most instructive history. The history of the gradual rise of the men of our own station in society from grovelling slavery up to the noble independence of free-born Britons, is a glorious chapter in the annals of human nature. No Englishman ought to be wholly ignorant on this point. No man who is liable to be called to act as a peace-officer, a jurymen, a witness in a court of law, or the elector of legislators, or a petitioner to Parliament, ought to be ignorant of the several duties implied. No enlightened statesman wishes to keep you in ignorance on these points. Such a man considers the institutions of our own country to be 'institutions of intrinsic worth, founded on the rock of righteous principles. He is desirous that the people should perceive how intimately their own well-being depends on the stability of the state, thus making themselves wise to obedience.' It was with reference to these very matters that an able writer of a past age, when our constitution had not attained its present defined form, said, 'Ignorance is rude, censorious, jealous, obstinate, and

proud: these being exactly the ingredients of which disobedience is made; while obedience proceeds from ample consideration, of which knowledge consists.'

"IV. Read the outlines of general history, and extend your knowledge by reading more particularly those parts which are of the greatest interest. Not to know the leading facts of history, is childish ignorance. But, the facts being known, we are to exercise our own minds on them; and not to give them up to be altered or commented upon, to support the favourite opinions of any individual.

"V. Make yourselves acquainted with the general facts of science, with the wonderful laws by which the Almighty governs all that surrounds us; and with the endless illustrations of these laws, in the world and all its parts. You will find here a rich and boundless variety of instruction and entertainment. But here, as in reading history, keep to the facts. All that is real is worth knowing. Be not led by speculations, by mere guesses. Many are bewildered by these. But Paley's maxim may be safely recommended, as the best guide in all such cases, that 'true fortitude of understanding consists in not suffering what we do know to be disturbed by what we do not know.' To which we may add the wise sentiment of another writer, that, 'in the present world, the Almighty intends to proportion our knowledge to our wants, and not to our pride.' The facts of natural history will afford abundant matter of agreeable and useful knowledge. The plants, the animals, the minerals, the soils, of your own country and of other countries; the changes of the seasons; the state of the atmosphere; the make and composition of all that surrounds you, duly observed, and made the subject of reading, of conversation, of reflection, will at once store your mind, and raise your ideas of the wisdom and goodness of Him, who, it will soon be perceived, has made all things 'by number, weight, and measure.' The study of your own frame, your bodily make and constitution, may be made an object at once of interest, of instruction, and of benefit. Early may you be brought to perceive, in the very constitution of your own bodies, much of your duty as enjoined by Him who formed you such as you are. Temperance, self-government, moderation, avoidance of all abuse of the body, are written in the very make of the body itself. And it will hence plainly appear, that when our Maker says, abstain from all intemperance, from all impurity, he does but say, 'Do thyself no harm.'

"VI. Acquaint yourselves with the inventions and improvements of modern art, and especially with all those which relate more particularly to the improvement of your own occupations. A little reflection will show you how much is to be learned as to these. Even a man who eats his daily bread by the honest labour of his own hands, can now adopt what a late admirable writer on natural philosophy has thus suggested:— 'There are ships crossing the seas in all directions, to bring me what is useful from all parts of the earth. In China men are gathering the tea-leaf for me. In America they are planting cotton for me. In the West India islands they are preparing my sugar and my coffee. At home powerful steam-engines are spinning and weaving for me, and making cutlery for me, and pumping the mines to supply me with coals. If I write a letter there is a mail ready to carry it for me, east, west, north, or south, at home or abroad, by day and by night. I have rail roads, canals, bridges, and ships, to bring my fuel. I have editors and printers to inform me of what is going on over all the world. I have books, the wonder of all wonders, that carry me to all places and to all times, and enable me to converse with many of the wisest and the best of men, both of my own age, and of all past ages.'

"It is a subject of honest congratulation to men of your situation in life, that to the labours of such as yourselves,—to their inventive powers in numberless instances, and to their powers of execution in all,—the national greatness in the progress of arts is chiefly owing.

"VII. Read poetry; for, as imagination is the common property of man, belonging equally to all ranks, no valid reason can be given, why its pleasures should be denied to any. It has pleased Him, from whose Spirit the sacred writings came, to present to us considerable portions of them in the most vivid style of poetry. This delightful art, thus consecrated, should, however, be used for no purposes but to instruct, to elevate, and to soothe the soul of man. It has been lamentably perverted to far other purposes, to abuse the mind with false and dangerous sentiments, to debase and to inflame. Read poetry, therefore, with reserve and caution. 'It is a luxury and not a necessary: and hence a little of superior growth, may well content us,' as a sensible writer has remarked. He who begins his poetic reading with the delightful pages of Thomson, which reflect the image of that Nature their author so warmly loved; of Cowper, who heard every where 'the loud hosanna sent from all God's works;' of Milton, who, with the most vigorous genius, and the most fearless independence of natural disposition, soared beyond the bounds of time and space, with the express design of 'justifying the ways of God to man;'—he who thus begins his poetic reading, will have acquired a taste that will not easily descend to vitiate itself with what is mean in composition, or polluting in tendency.

"VIII. Read the evidences of revealed religion. It is no secret, that, among some pretenders to knowledge, there is a cherished disbelief of the divine authority of the Holy Scriptures. On this point I will make only two observations,—that no man can deserve the character of an honest man, who rejects the Holy Scriptures without having attentively read the collected proofs of their divine authority;—and that, to adopt the maxim of a poet,

'What none can prove a forgery, may be true;
What none but bad men wish exploded, must.'

"Should any young man be ready to say—'This will be too much for me—I can never fag at this rate,'—we have two answers ready. First, you need do no more than you have time and inclination to do; but, whatever you take in hand, stick to it. Secondly, that there is no way to knowledge of any kind, without taking pains.

"The pleasure, however, of success, will amply reward industry. Strenuous, continued exertion will correct and strengthen the mental powers. Let modesty, humility, and a deep sense of the highest duties and obligations, accompany this: and the individual thus occupied, will be under that training, which ensures the largest measure of true happiness here, with progress towards a nobler state of existence."

Chinese Aphorisms.—He who toils with pain will eat with pleasure. No duns outside and no doctors within. Forbearance is a domestic jewel. Something is learned every time a book is opened. To stop the hand is the way to stop the mouth. Who aims at excellence will be above mediocrity; who aims at mediocrity will fall short of it.—*The Chinese, by J. F. Davis, Esq.*

* * The Office of the Society for the Diffusion of Useful Knowledge is at 59, Lincoln's Inn Fields.

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THE ISLE OF WIGHT.—No. I.



[View of Alum Bay.]

It has been said in praise of the island of Great Britain that it contains within itself, on a small scale, specimens of all the beauties and variety of scenery of the whole of Europe. In a similar manner we may almost say that the Isle of Wight contains within a narrow compass all the most pleasing and picturesque features of Great Britain. No person with any eye or feeling for the beauties of nature ever visited this fair isle without delight; and we trust we shall render no unacceptable service by drawing our readers' attention to it, and pointing out a few of the pleasures they may obtain in the course of a short and cheap tour. The rail-road, already in progress, will soon bring Southampton within a few hours' ride of London, and from Southampton to Cowes, the usual landing-place in the Isle of Wight, the distance is so short that it is performed, by regular steam-boats, in little more than an hour. The passage from Portsmouth seldom exceeds half an hour.

Though the largest island in the British Channel, the Isle of Wight is only twenty-four miles in its greatest length, that is, from east to west, or from the Needles to Foreland Farm, and about twelve in its

greatest breadth, or from Cowes Castle to Rocken End. Its form is that of an irregular ellipsis, and it has been compared to the shape of a turbot. It contracts at its two extremities, and is very narrow towards the west. The entire circumference is generally set down at about sixty miles, and the island contains from 120,000 to 130,000 acres of land, of which a great portion is very productive. The high downs are excellent sheep-walks, and the farms are generally so contrived as to unite pasture with arable land. An old boast of the peasants is, that this fortunate island yields seven times as much as its inhabitants consume. At a very early time it exported a considerable quantity of wool.

The breadth of the sea-channel that separates the island from the main or the Hampshire coast varies from six to four miles; while at one particular point, near Hurst Castle, in Hampshire, there is such a projection from the main-land towards the isle, as to leave a passage by water of no more than one mile. Thus those who are most indisposed to sea voyages have little to fear. The channel or strait is called the Solent, or the Solvent Sea*, probably from

* Bede calls the channel "Pelago Solvente."

the manner in which its waters have eaten away the opposite coasts and separated the island from the main land, which were evidently once united. This separation, however, must have taken place before the conquest of Britain by the Romans, who describe Vecta or Vectis (Wight) as an island. The Romans took possession of the Isle of Wight in the reign of the Emperor Claudius, about the year 45 of the Christian era, and kept it till 495, when it was reduced by Cerdic the Saxon, who is said to have cut off the few aboriginal Britons that still remained there. During the Saxon Heptarchy, when England was unhappily cut up into little kingdoms jealous of, and almost continually at war with one another, the pleasant hills and quiet valleys of the Isle of Wight were often made to run with blood. In 678, when the population of the island still adhered to the old Druidical superstitions, Cædwalla, king of the West Saxons, made war upon Edelwach, king of the South Saxons, in whose possession the island then was. Cædwalla prevailed in the struggle, slew his rival, and passing over to the Isle of Wight, put all the people to the sword, except 300 families, who were forcibly converted to Christianity, and then, with a fourth part of the island, given by the conqueror, who had made a vow to that effect, to Wilfred, Archbishop of York. During the incursions and invasions of the piratical Danes, the island was frequently plundered and desolated. In 1052 Earl Godwin, who was then an exile and an outlaw, having obtained a fleet from the Earl of Flanders, stripped the wretched inhabitants of all that had escaped the rapacity and barbarity of their former invaders. The now happy islanders will hardly conceive the frequency and the cruelty of these attacks; but if they reflect upon them, they will have motives to be grateful for that progress in civilization and in national strength (the consequence of civilization) which have secured to them the undisturbed enjoyment of life and its blessings.

At the period of the Norman Conquest (1068) William Fitz-Osborne, carrying fire and the sword, subdued the island for his own use and profit, and became the first Lord of Wight. He founded a stately priory near Carisbrook, and built several churches. This Fitz-Osborne, who is better known in English history under the title of the Earl of Hereford, bestowed the Priory of Carisbrook and the churches he founded in the island on the great Abbey of Lyra, in Normandy, which also owed its origin to his devotion and munificence. The monks were of the Cistercian order.

For more than two centuries the island continued to be governed by its independent lords, who, like those of the Isle of Man, exercised all the rights of sovereignty; but in 1293 Edward I. purchased the regalities for a sum of money, after which the kings of England retained for themselves the title of Lord of the Island, and governed it by *custodes* or wardens. The person who sold the regalities was a lady—namely, Isabella de Fortibus, *Lady of Wight*, &c., who had succeeded to the honour in 1283 by the death of her brother Baldwin, fifth Earl of Devonshire and Lord of the Isle of Wight. The money she received from the crown was 4000*l.*, and she is said to have died on the same day that she concluded the bargain and alienated the rights of sovereignty from her family. But it was only these rights or regalities that were sold to the king, as she disposed of her estates on the island by will. The title of Warden, conferred upon the king's representative, was afterwards changed into that of "Constable of Carisbrook Castle," to which was sometimes added, "and Captain of the Isle of Wight." The title of "Governor" gave great offence to the islanders, who thought an extension of power was intended thereby, and when (in 1558) Sir George Carey assumed that

title, and claimed unwarrantable authority over them; they very properly resisted him; and the powers objected to were never more heard of, though the title of "Governor" was resumed in 1634 by Jerome, Earl of Portland, and was long continued in other persons. The weak and unfortunate Henry VI. conferred the title of *King of Wight* upon Henry Beauchamp, Duke of Warwick, and in a ridiculous coronation placed the crown on the duke's head with his own hands. It appears, however, that this ceremony conferred no regal power, as it was held that the king had no right to touch the integrity of the British monarchy, or transfer any part of his sovereignty, and that the empty title was left to expire with the nobleman who first bore it. Before the time of the duke-king, the island had been partially fortified, and means had been adopted to defend it from the attacks of the French. During the reign of Edward III. twenty-nine beacons and watch-towers were erected at different points, in order to spread the alarm over the whole island when an enemy was approaching. Two men by day and four by night kept watch and ward at each of these towers; and every landed proprietor was bound to find men and arms, in proportion of one man for every 20*l.* a year his estates rendered him. In case of an attack the Lord of the Island furnished seventy-six men, the clergy sixteen; the Abbot of Glastonbury, the Bishop of Winchester, and other great churchmen who held lands there, contributed their quotas, and the *custos insulæ*, or warden of Wight, could summon home absentees, and make other provisions for the common security. Every landowner was bound when called upon to do garrison duty for forty days, and at his own expense, in Carisbrook Castle, the main fortress. This castle was often attacked by the French, but never taken, the islanders on every occasion making a gallant defence. In 1340 Sir Theobald Russel, one of the wardens of Carisbrook Castle, was killed in an action with the French invaders, who were, however, thoroughly beaten and driven back to their ships. In 1377 the French, who had laid a regular siege to it, were obliged to retire with great loss. In the following century, while Henry V. was desolating France with his mad wars, a body of Frenchmen, determined to carry the same curse into his own dominions, suddenly appeared off the Isle of Wight, and effected a landing there. After burning some detached cottages and farm-houses, this force was defeated by the inhabitants and driven back to their ships. From this time till the reign of Henry VIII., the French made no new effort, but then they succeeded in landing on the island, and plundered a good part of it.

Shortly after this sad event the islanders furnished themselves with a parochial artillery; each parish provided one piece of light brass ordnance, which was carefully kept either in the church or in a small house built for the purpose close by the church. Towards the end of the last century some sixteen or eighteen of these guns were still preserved in the island; they were of low calibre, some being six-pounders and all the rest one-pounders. The islanders, by frequent practice, are said to have made themselves excellent artillerymen. The gun-carriages and ammunition were provided by the parishes, and particular farms were charged with the duty of finding horses to draw them*.

From the time that the naval superiority of Great Britain was established, these measures of defence on the part of the islanders became almost unnecessary; their protection was secured by our "wooden walls;" no more invaders could set their feet upon the happy soil; and whilst hundreds of our fleets went by in succession from Portsmouth and Spithead, to carry war to

* Pennant: 'Journey from London to the Isle of Wight.' Sir Richard Worsley: 'Hist. Isle of Wight.'

every corner of the globe, the Isle of Wight had nothing to fear for itself.

In our view of the interior of the island we may mention a few local occurrences, but, in an historical sense, there are few events of any importance to distinguish its annals from those of England at large.

The natural division of the island is very clearly marked; a central chain of hills and downs cuts it into two nearly equal parts, the one being north and the other south. The southern part, which is farther from the Hampshire coast, and much the more picturesque, bold, and secluded of the two, is commonly called the "back of the island." Another natural division into east and west is formed by the river Medina, which, rising at the foot of St. Catherine's Down, traverses the island, and falls into the Solent Strait at Cowes. The country to the east of the river, called East Medina, and that on the other side, called West Medina, are nearly equal in extent of territory. The whole of the island is politically subdivided into thirty parishes, fourteen of which are to the east of the river and sixteen to the west. The entire population of the Isle of Wight, as shown by the census of 1831, was 35,363 persons. Previously to the passing of the Reform Bill the isle returned six members to Parliament; that is to say, two for the borough of Newport, two for Yarmouth, and two for Newtown; but since that great constitutional change, the Isle of Wight, being detached from Hampshire and becoming a county of itself, returns one member as such, and only two borough members for Newport, Yarmouth and Newtown being both disfranchised. Newport, which is now the capital, though Carisbrook enjoyed that honour in old times, contains a population of above 4300 persons, and is a place of considerable trade and activity.

A very favourable character has been generally given of the islanders. To quote an enlightened foreigner, M. Simond praises their politeness, love of neatness, and orderly behaviour. In the course of his tour at the back of the island, he says, "The meanest of their cottages, and those inhabited by the poorer class, were adorned with roses, jessamines, and honey-suckles, and often large myrtles, which, on this southern coast, bear the winter out of doors. There were vines everywhere against their houses, and often fig-trees. We thought the women remarkably good-looking. Children and grown people took off their hats, or gave us a nod, as we passed along*."

Having taken lodgings for a whole week at the village of Steephill, in a fisherman's cottage, which was a sort of ale-house, he had there an opportunity of observing a new class of people (the fishermen), of whom he reports, much to their credit, that he found them remarkably decent and well-behaved; not addicted to drunkenness (the capital vice of our poor, and the cause of all their other vices)—not quarrelsome among themselves, but friendly, good-humoured, and very cheerful.

The most striking and distinctive features of the Isle of Wight exist on its coasts, which present a continual succession of natural phenomena, and grand or beautiful scenery. The tourist who is favoured by fine weather, and has time enough, would do well to make the tour of the island by sea; as in that manner he will see many things that would otherwise escape him, and take in the stupendous dimensions of cliffs and rent columns with far more effect than in looking at them from above, or from the narrow line of the shore.

We will attempt to describe a few of the scenes to be met with in this brief circumnavigation, before we speak of the quieter rural beauties of the interior. We will begin with the picturesque maritime town of Cowes,

where we landed when we visited the island, and thence proceed along the western coasts to the Needles and the back of the island. This pretty town, surrounded by gentlemen's seats and elegant cottages, is situated at the mouth of the Medina, standing partly on the eastern and partly on the western bank of that river. A port and roadstead generally crowded with shipping offer animated seaward views; and on the land side there is a variety of beautiful walks through an undulating country, where trees are everywhere mixed with the habitations of men. Old Cowes Castle is a small fortress on the sea-shore, offering no very picturesque features; but East Cowes Castle, and Norris Castle, in the neighbourhood, though both *modern* Gothic structures, are fine objects in the scenery, and beautifully situated. As our object at present is to describe the coast of the island, we will refrain from giving farther details about this town, which is one of the most important and most frequented in the Isle of Wight.

On leaving West Cowes, we sailed under the pleasant West Cliff, and, doubling a little promontory, came into Gurnard's Bay, where a small stream, called the Rue, falls into the Solent Channel. Thence, crossing Thorness Bay, we reached Newtown, which is curiously situated on a deep and irregular inlet or creek of the Solent, which admits vessels of considerable burden. Though formerly a market-town of some consequence, and though, until very recently, it sent two members to Parliament, Newtown is but a small village, with fourteen or fifteen cottages, and a population of about seventy persons. The only trade it now has is derived from some salterns, or saltpans. In the rear of the village are the picturesque remains of an old church, which are almost entirely concealed by luxuriant ivy. From Newtown Bay we sailed slowly along the coast to the estuary of the river Yar, on the eastern bank of which stands the town of Yarmouth. During this short voyage from Cowes the tourist catches fine glimpses of the interior scenery of the island, backed by hills and downs; but the coast itself, though prettily sprinkled with small hamlets and fishermen's huts, and covered in many places with green grass, or trees, to the water's edge, yet offers none of those features of sublimity which occur a little beyond Yarmouth. This town, the most important on the western end of the island, is very advantageously situated, and has a constant intercourse, by means of steam-boats and sailing-vessels, with Lymington on the main, from which it is distant no more than four miles: its port or roadstead is excellent. The population of Yarmouth, however, is but small, not much exceeding 600 persons. There are no very old buildings, for the town was totally destroyed by the French in 1337. The small castle or block-house at the entrance of the river was built by Henry VIII. to defend the town from the naval attacks which Francis I. commenced after Henry had leagued himself with the Emperor Charles V. In 1671 the fortifications were improved, and in the course of that year Charles II., on a royal progress, paid a visit to Yarmouth, where he was entertained by "That Gallant Admiral Sir Robert Holme," a hero of no mean fame, who lies buried in the parish church, with a statue and a long epitaph over his ashes. The church is nearly 300 years old, having been built in 1543, but it underwent a thorough repair in 1831. Yarmouth sent its two members to Parliament as early, it is said, as A.D. 1304.

The river Yar, which has a fine appearance at high water, rises close to Freshwater Gate, on the opposite side of the island, and within a few yards of the sea, which, in stormy weather, has been seen to break over the narrow ridge of separation, and mingle its salt waves with the fresh waters of the river-head. The Yar almost insulates the western extremity of the

* 'Journal of a Tour and Residence in Great Britain.' By Louis Simond.

island from the rest of the Wight; and, were it desirable, the ocean could be easily made to flow through its bed, from the south to the Solvent Strait at the north. To this end nothing would be required but to cut through the very narrow isthmus at Freshwater Gate. The river Yar is navigable up to Freshwater Mills, and affords a pleasant aquatic excursion.

On leaving Yarmouth we almost immediately reached Sconce Point, where Hurst Castle, standing at the end of a projection from the Hampshire coast, presents itself in a picturesque manner, and apparently almost within reach. At the turning of Sconce Point into Colwell Bay the peculiarities of the coast begin to appear. The cliffs become lofty and vertical, exposing their different strata, the lowest of which is of white sand, and more than thirty feet thick. This continues along Totland Bay to the grand eminence of Headon Hill, which rises 400 feet above the level of the sea, which is here remarkably clear, with a fine rocky bottom. On turning this point the voyager finds himself in a remarkable bay, at the southern side of which the Needles show their fantastic shapes,—their rugged narrow ridges, in summer time, being generally covered with sea-fowl.

Alum Bay, a section of which is correctly represented in our engraving, presents indeed one of the most striking scenes on this curious coast. On one side it is bounded by lofty precipices of chalk, of a pearly colour, broken and indented;—on the other by cliffs strangely but beautifully variegated with different colours, arising from the strata of red and yellow ochres, fuller's earth, black flints, and sands, both grey and snowy white. The white sand is valuable for the manufacture of glass and chinaware, and is exported in considerable quantities. Of the coloured sands, which are uncommonly bright and pretty, the people of the island make little chimney-piece ornaments, by putting them into phials, and so arranging and contrasting the different tints as to form fantastic designs. Alum and copperas-stones are also picked up on the shores of the bay, and exported in small quantities.

As the tourist changes his position in Alum Bay, the Needle rocks, which are five in number, though only three of them now stand boldly out of the water, vary their irregular forms to the eye in a most singular manner. From some points they appear as if united in one broad rugged mass; from others they are seen detached, and looking like old fortresses which had battered each other to pieces, or fallen into one common ruin under the weight of time and the violence of tempests. It would require the pencil instead of the pen, and many successive views, to give a notion of the variety of these combinations; but the natural causes which have produced these phenomena admit of an easy and brief explanation.

A very sharp point of land forms the western end of the Isle of Wight. This has been broken by the sea, and divided into several large columnar rocks, that now seem to have risen out of the waters. These rocks, which are famous under the name of "The Needles," stand on a line with the extremity of the island, of which they were formerly a part. They are white, with a black base, and curiously streaked with black dots, from the alternate strata of flints. A traveller has remarked, that, at a distance, they look more like thimbles than needles. The only one of them to which the name of needle was at all applicable was of a cylindrical shape, thin, and above 100 feet high, measuring from low-water mark; and this one fell down and almost entirely disappeared about sixty years ago, its base having been worn through by the continual action of the waves and tides. Seamen used to call it the "pillar of Lot's wife." It was the farthest from the island: its base, consisting mostly of flint, is still

visible, and in stormy weather it forms a dangerous reef. From the chalky nature of this remarkable group of rocks, and of the coast of the island from which they have been detached, continual changes are taking place in their form and disposition. In some places the sea has eaten them through, and formed large and irregular archways; in others it has so washed away their sides that they look rather like walls than solid rocks; while deep caverns have been formed in the chalky cliffs of the island, which fall in from time to time, and gradually diminish the island in that direction. At no distant period the present Needles, or rocks, will have wholly disappeared; but new ones will be formed out of the western end or projecting point of the Isle of Wight, which, already extremely narrow, will be insulated like the Needles, when the sea, at work on both sides, shall have quite broken through the thin partition. Whilst standing on this perilous part of the island, in 1811, M. Simond says, "We observed, with some terror, a long crack along the margin of the cliff, cutting off a slice of the downs (sheep were quietly feeding upon it) of full one acre. This slice has settled down already two or three feet, and must soon fall. The next heavy rain, or frost, or high wind, may detach it,—and down it slips 660 feet perpendicular! We had landed yesterday on the flinty beach precisely under this cliff, twice as high as those of Dover, and more exposed to an open sea."

The Needles' light-house is built on the highest point of this western part of the island, at an elevation of 715 feet above the level of the sea. The building is a low truncated cone, but its light shines afar like a brilliant star, being distinctly seen at sea at the distance of eleven leagues. It is cited as a proof of the healthiness of this airy height, that an old couple who lived in the light-house, and sat up by turns all night to attend to the lamps, were never, during the long term of nineteen years, hindered by sickness from attending to their duties a single night. It is observed that at the Needles the tide rises only eight feet, and at the whole back part of the island no more than nine, while at Cowes, on the other side, it rises fifteen feet.

On turning the Needles and the most westerly point of the Isle of Wight, into Scratchell's Bay, the rough sublimity of the cliffs continues, and there commences a series of caves that end at Freshwater Gate. The chalk cliffs are perhaps unequalled in the world;—they rise upwards of 600 feet above the level of the sea, perpendicularly in some places, and overhanging, in an alarming manner, in others. They are for the most part perfectly white, with narrow streaks of black flint, much inclined to the horizon, like the flint streaks of the Needles. The several strata form rough projecting shelves, that serve as lodgments for the sea-fowl and other birds, that congregate here in prodigious numbers. There are cormorants, gulls, puffins, razor-bills, willcocks, Cornish choughs, wild pigeons, daws, starlings, &c., that in certain seasons sit in tiers, the one above the other, almost covering the entire face of the cliffs. At the report of a gun they scream, fly out, and almost darken the sky with their countless wings. At times flights of these birds skim the air in endless circles, and wheel round the head of the tourist on wings that seem without motion, and with a cry like a horse-laugh. One or two species remain all the year round, but most of them are migratory, coming in May, when they lay their eggs in the rocks, and taking their departure about the middle of August, after which they are seen no more till the next breeding-season. During their stay, they are not left undisturbed in their seemingly inaccessible retreats. Unable to get at them from below by climbing, the islanders reach them from above by descending the perpendicular cliffs, in much the same perilous manner as is practised by the Norwegians and the hardy natives



[View of Black Gang Chine.]

of the Feroe Islands. They drive a large stake or iron bar into the top of the cliff;—to this stake or bar they fasten a strong rope, at the other end of which there is a stick put crosswise for the adventurer to sit upon, or support himself by; and with this simple apparatus he lets himself down the front of the horrid precipice. If his object is to secure eggs, he halloos as he descends, to scare the birds away; but when he wishes to obtain feathers and the birds themselves, he goes to work in silence, and either catches them in their nests or knocks them down with a stick as they fly out of their holes. The soft feathers of the birds are of value, and find a ready market with upholsterers; their flesh, which is rank and fishy, is bought by the fishermen, who cut it up and use it for their crab-pots and other baits. Some of the eggs are said to be very good eating. Worsley says that in his time a dozen birds generally yielded one pound weight of soft feathers, which were sold for 8*d.* the pound.

Standing on the summit of these tremendous cliffs, Shakspeare might have said, with stricter accuracy than he did of those of Dover,

“The murmuring surge,
That on the unnumbered idle pebbles chafes,
Cannot be heard so high.”

Here, too, grows samphire, in fine green tufts; and those who gather it, “perilous trade,” are let down by a rope from above, in the same manner as the fowlers. The pebbles below, over which the sea rolls, are black and shiny, being mainly flints loosened or dissolved from their beds in the chalk, and broken and polished by the friction of ages, produced by the never-resting tides and waves. The water at the foot of the cliffs is so clear, that one can see, many fathoms deep, to the bottom of it.

We are now at the back of the island. Rowing under Freshwater Cliffs, the tourist may visit Neptune’s Caves, the larger of which is 200 feet deep;—the bay of Watcomb, where the scenery is as bold and almost as curious as at Alum Bay,—and then Freshwater Cave, which is about 120 feet in depth, and, taken altogether, the most romantic of these caverns. A rude fantastic arch, about thirty feet high, and of the same width, and two lateral arches of smaller dimensions, separated from each other by a thin rocky column, give admittance to this wild and deep recess. Looking seaward, from the interior of the cave, the view is at once curious and beautiful. Through the main arch a glorious expanse of ocean presents itself; and looking through the side arches, which are of an arrow-head shape at top, you see part of the rocky coast of the Wight as through the Gothic windows of a cathedral.

A little farther on, a detached arched rock stands boldly out into Freshwater Bay, its rough edges generally crowded with screaming wild sea-fowl. It is now nearly 600 feet from the cliffs of the island, of which it once formed a solid part. In the centre of this bay is a creek, called Freshwater Gate, with a huge columnar rock, rising out of the sea immediately before its mouth. It is just behind this creek that the Yar rises, which river, running due north, right across this end of the island, falls, as we have said, into the Solent Strait at Yarmouth. In the time of Queen Elizabeth an earthen redoubt was thrown up on the narrow isthmus that separates the sea from the river—a bit of fortification that cost the sum of 65*l.* 11*s.* 2½*d.* precisely. Near to this point is Compton Bay, where there is a delightful walk on a broad margin of silvery sand. Passing the pretty village of Brook, and a curious group of small rocks,

called the Bull Rocks, which are frequently dangerous to seamen, we shoot into Brixton Bay. Here the cliffs become much lower, and are cut and rent towards the sea in an extraordinary manner. These chasms, which, in the language of the islanders, are called *Chines*, form one of the most characteristic features of the coast. Sir Richard Worsley has endeavoured to explain the etymology of the term "chine." "This term," he says, "is applied to the back-bone of an animal (both in the manège and culinary language), which forms the highest ridge of the body. *Echine*, in the French, is used in the same sense; and Boyer has the word *chinfreneau* for a great cut or slash. Hence the word chine might be thought peculiarly expressive of a high ridge of land cleft abruptly down; and the several parts of the southern coast denominated chines all correspond with this description." Our worthy historian, having got upon the stalking-horse of etymology, from which people are seldom in a hurry to dismount, goes on to prove the derivation of chine from a Greek word; but we may leave the matter here, it being enough for our readers to understand what is meant by the English word in the Isle of Wight, or that a chine is a place where the ridge of the cliffs is cut through by the action of water running seaward from the interior of the island, or by other means, and where a ravine is formed opening to the shore. Every one of the chines has a stream of water running through it. In Brixton Bay there are above a dozen of them; but they are inferior in magnitude and picturesque beauty to some we are fast approaching. Among them, however, Compton Chine and Brooke Chine are worth visiting.

After leaving Brixton Bay and passing Atherfield Point, and another group of rocks that lies off it, the voyager will find himself in Chale Bay, where free-stone cliffs, and of a tremendous height, impend over the shore. Whether seen by sea or land, the views here are sublime. On St. Catherine's Hill, the most elevated point of the whole island, "there is a stern round tower of other days," which has a happy effect in the landscape, and is not uninteresting in its history. It was built above those terrible precipices as far back as the year 1323, by Walter, lord of the neighbouring manor of Godyton, who assigned certain rents for a chaunting priest to sing mass in it, and also to provide light in the tower (which was at once a chapel, a hermitage, and a pharos), for the safety of seamen in dark and stormy weather. At the Reformation the trifling revenues were sequestrated or alienated,—the poor monk ceased his mass, and the lights to shine across the deep, where rocks and shoals threatened destruction to the "night-faring skiff." On the latter point, however, our regret may be the less, as it is asserted that, owing to its great elevation, the pharos is so frequently surrounded with mists as to render even the best of modern lights of no avail there, when they are most wanted. By day, and in fine weather, however, the old tower still renders good service, being an excellent landmark. Mr. Pennant informs us, that it was thought of such importance in his time, that it was thoroughly and solidly repaired, and that, in clearing away the rubbish that had fallen in, the workmen discovered the form of the little chapel, and the floor of the little cell in which the pious priest used to sleep. This tower stands more than 800 feet above high-water mark, and commands a most extensive view, embracing the whole of the island, except one corner, the Hampshire coast, the New Forest, Southampton Water, Portsdown Hills, the downs of Sussex, Beechy Head, the isles of Portland and Purbeck, and (on a very fine day) part of the French coast near Cherbourg.

Chale Bay, which is about three miles in extent, is considered very dangerous in stormy weather. the

shore is everywhere bold and bluff, and there is always a large swell rolling in on it; when that swell is attended with what sailors call a ground-sea, not even the strongest Newfoundland dog can gain the shore by swimming.

On the coast of the Wight, at the foot of this towering eminence, and in Chale Bay, occurs one of the finest of the chines or ravines, called "Black-Gang Chine" (see view, p. 141). This gloomy fissure penetrates far into the cliffs that form the most southern point of the Isle of Wight. At the upper part of it, a stream, which no doubt has largely contributed to the disruption of the soil and the formation of the chasm, falls over a ledge of rocks that is nearly eighty feet high. At certain seasons, after long and heavy rains, this is no mean cataract; but during fine summers the scanty stream is retained behind the rocky ledge, or merely trickles over the brow of the precipice. Without this adjunct, however, the Chine is wild, picturesque, and gloomily sublime. In some places, the cliffs on either side of it are nearly 500 feet high. These rocks are of the wildest forms, and in colour almost black. There is scarcely a trace of vegetation. The whole scene reminds one of a chasm in the Alps, or, still more, of some of the lava recesses in the flanks of Mount *Ætna*. Near the Black-Gang Chine, and in that very ravine, are some curious evidences of the landslips that occur so often on these coasts, and alter their appearance and character.

Continuing our circumnavigation, and doubling St. Catherine's Point, we find ourselves close to that remarkable part of the island called the Undercliff, where the effects of great and remote landslips show themselves on a prodigious scale. Here a strip, of about six miles long and from a quarter to half a mile in breadth, seems to have settled down and slipped towards the sea, exhibiting a jumble of rocks overturned and broken—mounds of earth—deep hollows—and numerous springs, forming falls of water, collecting into pools, and hurrying to the sea*. The cliffs that immediately face the sea vary from 60 to 100 feet in height, and upon these runs the long irregular platform or terrace, which is backed on the north by a bold abrupt steep—a wall of rock, rising from 200 to 300 feet higher. These upper or land cliffs are composed of horizontal beds of sandstone; being precisely the same material as is seen on the broken surface below. It is every way evident that the sunken tract, or under cliff, was formerly a continuation of the high cliff. "The crisis of this part of the under cliff," says M. Simond, "is evidently of no recent date, and the earth has had time to grow young again; for, contrary to the laws of organized life, inert nature loses with age its original deformity and barrenness and is indebted to the very dissolution of its substance for beauty and fecundity." The same observer, in trying to account for the landslips, thinks it probable that the numerous springs which now run over the surface of the Undercliff to the sea, must formerly have flowed under it, and may have worn wide passages through some soft under-strata to the sea, the waves of which, penetrating into these fresh-water courses, may gradually have undermined the foundation of the superincumbent mass so as to make it give way, upon which it partly settled down, and partly spread out into the sea.

It should appear that the Undercliff has been formed rather by a succession of landslips, than by one grand fall or subsidence. These changes are still occurring on a larger or smaller scale, at the two extremities of this, the south-eastern, side of the island. In the year 1799, a large tract of the high cliff (from eighty to ninety acres) was of a sudden seen sinking and sliding towards the sea, the surface breaking into strange shapes, and yawning chasms, closing and opening

* M. Simond.

again. This was at the western end of the Undercliff, near Niton; and a few years ago a slip of country, about a mile to the south of that village, gave a good notion of a country that had been overturned by a dreadful earthquake. The remains of a house that had been partly swallowed up were still seen. Another of these landslips happened in the winter of 1810-1811 at the eastern extremity of the undercliff district, close to Bonchurch. M. Simond, who was on the island a few months after this subsidence, says that it extended over forty or fifty acres. The whole of his description is singular and very spirited.

"The rents here are frightful; and the rocks are in some places ground to fragments, by their friction against each other. The old surface, with its vegetation, seems to have been swallowed up, and new soil, white and barren, substituted. We have seen the roots of trees actually standing up in the air, while their branches were buried in the soil! a poetical situation, assuredly, which put us in mind of that picture of the deluge, in which two human feet only appear on the surface of the waters." [What follows is exceedingly consoling to those who are anxious for the preservation of the beautiful and salubrious undercliff.] "The chaos of *débris* that fell, now forms a promontory into the sea. The phenomenon of the landslips, thus going on at the two extremities of the tract (E. and W.), and not in the middle, seems to indicate that this middle has reached a solid basis, and is really now quite firm."

In 1818 there was another landslip, which threw out another little promontory into the sea. We believe there are no records of any loss of human life occurring from these moving mountains. At all events the peasantry who reside on the spot testify but little apprehension, their usual answer to any queries being, "Oh! it is all firm and strong hereabout."

The Undercliff, as it has been well observed, unites, in a singular manner, the pastoral wildness of Scotland, the luxuriant vegetation, verdure, and shade of the middle parts of England, with a bold shore, and an unbounded sea, continually traversed by ships.

The great terrace or platform of the Undercliff rests upon a sub-stratum of blue marl, and is broken above into a succession of smaller terraces, rising irregularly above one another, and diversified with hillocks of all shapes and sizes. Wheat grows exceedingly well on this perturbed soil, and potatoes and all other crops flourish equally. In the lower part are some open pastures covered with Alderney cows, and flocks of sheep hang on the steep downs in the back-ground. The trees that have been planted thrive in a wonderful manner, and with the luxuriant myrtle-bushes form on every side the most delightful shades, from which cottages, villas, churches, and villages peep forth with beautiful effect. This is indeed a favoured nook—an epitome of the regions of the fair South, protected and sheltered by a felicitous arrangement of nature in the regions of the North. It is not less healthy than it is lovely and picturesque. Doctor James Clark, after a careful examination of the places on the English coast best suited to persons threatened with consumption, gives the preference to Torquay, in Devonshire, and the Undercliff in the Isle of Wight; and he seems to think that many invalids might find those benefits from climate close at home, which they seek in distant countries, and too often separated from all their friends. "The whole of the Undercliff," he says, "which presents in many places scenery of the greatest beauty, is dry and free from moist or impure exhalations, and is completely sheltered from the north, north-east, north-west, and west winds, by a range of lofty downs or hills of chalk and sandstone, which rise boldly from the upper termination of these terraces, in elevations varying from 400 to 600 and 700 feet; leaving Undercliff open only in a direct line to the south-east, and obliquely to the east and

south-west winds, which rarely blow here with great force. * * * * Indeed it is matter of surprise to me, after having fully examined this favourite spot, that the advantages it possesses in so eminent a degree, in point of shelter and exposition, should have been so long overlooked in a country like this, whose inhabitants, during the last century, have been traversing half the globe in search of climate. The physical structure of this singular district has been carefully investigated and described by the geologist, and the beauty of its scenery has been often dwelt upon by the tourist; but its far more important qualities, as a winter residence for the delicate invalid, seem scarcely to have attracted attention, even from the medical philosopher*." This inattention, however, no longer exists: within these last six or seven years medical men have turned their views towards that spot, and accommodations for invalids have been materially improved and increased. Dr. Clark, to whom the praise of much of this result is due, may live to see the accomplishment of his prediction, that "the Isle of Wight will have added to its title of the Garden of England, that of the British Madeira."

In this little strip of mild climate and dry soil, snow is rarely seen, and frosts are only partially felt. The myrtle, the geranium, and many other foreign plants flourish luxuriantly in the open air all through the year. In the winter months the mean temperature of the atmosphere at eight o'clock in the morning is about 45°. But it is time to leave this "happy valley," where we have tarried long.

Continuing our excursion by sea, and keeping under the cliff, we soon come to Steephill Cove, an exceedingly pretty spot, but which, however, yields the palm of beauty and picturesqueness to Ventnor Cove, about a mile farther on, and near the eastern extremity of the Undercliff. Here the upland downs, the very edges of which are seen fringed with sheep and cattle, stand out in bold eminence; there is a cliff and a little stream that tumbles from it, after working a mill; lower down, on some shelving rocks, there is a group of fishermen's cottages, disposed as if a painter had had the arranging of them—nets, drying in the sun, baskets, oars, sails, "scattered all about," make up one of those marine pictures which can hardly be seen without delight; and finally, in front of these thatched cottages, there is a wide and beautiful beach, and then a far-spreading transparent sea.

Soon after turning the extremity of the Undercliff at East Point, above which towers the rugged and lofty hill of Bonchurch, we come to Luccombe Chine, which presents the picturesque features of rushing streams, hanging woods, scattered cottages, dark-brown cliffs, and a fine sea-shore. About a mile farther on (to the N. E.), occurs another of these curious ravines, deeply cut through the cliff by an inconsiderable rill. This is called Shanklin Chine, and is the most beautiful and most frequently visited of all the Chines. Seen from below, it appears as if the solid cliff had been rent in twain from top to bottom:—the mouth of the gap is very wide; its sides are on one hand almost perpendicular, on the other (to the right) more shelving, and partially clad with grass and moss, bushes, and wild flowers, and shaded with tall graceful trees, among which, high over the head of the tourist who approaches by sea, are a few cottages most picturesquely disposed. On this side a long rude flight of steps leads up the cliff to a quiet little inn. The beach below this Chine affords a delightful walk when the tide is out.

We are now in Sandown Bay, which sweeps in a beautiful curve from Shanklin Chine to the Culver rocks. At the further end of this bay, where the shores are flat and of easy access to an enemy, stands Sandown fort, a small work erected in the time of Charles I., and

* 'The Influence of Climate in the Prevention and Cure of Chronic Diseases, &c.'

near to it they show a quiet little cottage, which was once the residence of the turbulent and restless John Wilkes. The contrast between the nature of the secluded spot and the character of the man is rather interesting. According to his biographer, Wilkes bought Sandown Cottage, in Sandown Bay, in the parish of Brading, at the south-east end of the Isle of Wight, from Colonel (afterwards General) James Barker, of Stickworth, in the Isle of Wight, in May, 1788. He resided there a good deal till his death in December, 1797, and (according to this authority) by many improvements made it a very elegant abode. The cottage had been formerly in the occupation of the Earl of Winchelsea. Wilkes was accustomed to call it his *Villakin*, and he dated many of his letters from the place.

At the distance of about two miles from this spot, however, and to the south-east of it, the vast chalky precipice, called Culver Cliff, shows itself with fine effect. A bed of coal, which is about three feet thick, and dips to the north, is seen at the foot of the precipice. This fossil occurs in some other parts of the Isle of Wight, but in such thin veins as not to answer the expense of working it. The summit of the cliff is about 400 feet above the level of the sea, and affords a fine view across the British Channel. The name of *Culver*, according to Mr. Pennant, is derived from the Anglo-Saxon *Culfre*, a pigeon, and applied here on account of the swarms of those birds which make the cliff their haunt. The same writer tells us, that at certain seasons these pigeons make most amazing flights, going daily, in vast flocks, as far as the neighbourhood of Oxford, to feed on the turnip-fields, and returning again to Culver Cliff and the Freshwater Cliffs, where they pass the night. The Culver is also much frequented by *auks*, and other birds that love to nestle in the holes and crannies of precipices. In former times it was famous for a breed of hawks much used in the sport of hawking, and of so valuable a kind, that in 1564 Queen Elizabeth issued her warrant to Richard Worsley, Esq., captain of the island, to make diligent search after some that had been stolen, as also "for the persons faultie of this stealth and presumptuous attempt."

The grand scenery of these coasts terminates at Culver Cliff. Doubling the eastern extremity of the island, called the Foreland, and then coming to Bembridge Point, the tourist will find himself at the narrow mouth of Brading Haven, which is a shallow arm of the sea at high water; but a large and ugly puddle, with very little water in it, when the tide is out. Between 800 and 900 acres of marshy land are overflowed at every tide, and rendered useless. "My adventurous and noble countryman, Sir Hugh Middleton," says Pennant, "in the time of James I., in concert with Sir Bevis Thelwal, of the house of Bathavern, in Denbighshire, and page of the king's bedchamber, employed a number of *Dutchmen* to recover it from the sea by embankments; 7000*l.* were expended in the work, but partly by the badness of the soil, which proved a barren sand—partly by the choking of the drains for the fresh water—by the weeds and mud brought by the sea—but chiefly by a furious tide which made a breach in the bank, they were obliged to desist, and put a stop to their expensive project."

The small town of Bembridge stands near the mouth of Brading Haven, to the east; and the town and church of Brading are picturesquely situated on the slope of a hill at the bottom of the haven. At a short distance from the mouth of Brading Haven is the pretty village of St. Helen's, built round a green near the sea; and from this point there is a succession of gentle, rural views as far as Ryde, which, a poor fishing-village about eighty years ago, is now a considerable and beautiful town, surrounded, like Cowes, with groves, villas, and cottages. There is a fine view of Calshot Castle;

of Portsmouth, at seven miles distance; of its harbour, often full of shipping; of Spithead, with the men-of-war riding there; and, not to mention numerous other objects, of the distant spire of Chichester Cathedral. There is a good shore for bathing, with bathing-machines, warm baths, and all necessary comforts. The long bold pier of Ryde, which was begun in 1813 and finished in 1814, has been much admired, and it is a very great convenience, as passengers can land there at all times, whether the tide be high or low. In the interior of the town there are a few public edifices, built in a neat, if not elegant style.

After leaving Ryde we pass the hamlet and church of Binstead, the delightful little wood called *Quarr Copse*, in which are the ruins of an abbey, and then reach the mouth of Fishbourne Creek, through which a small river, called the Wootton, discharges itself into the sea. By the village of Fishbourne, which is sometimes called Fish House, there is a ship-yard, where some of the light, fast, and elegant yachts belonging to the Yacht Club have been built. During the last war some gun-brigs, and, it is even said with pride, some frigates, were launched from these stocks. Above Wootton Bridge the banks of the river rise in beautiful elevations, and are in some parts covered with little woods and copses to the very brink of the stream. At low water there is a practicable and very pleasant walk along the sea-shore from Ryde to Fishbourne. The village of Wootton Bridge, which is only partially seen from the mouth of the creek, is quiet and picturesque. From Fishbourne Creek to the harbour of Cowes, whence we started on this voyage, the coast is finely wooded; luxuriant forest-trees at some points seeming almost to grow out of the sea. This tract, indeed, excels all other parts of the island in woodland scenery, and forms a striking contrast with the bare, perpendicular, chalky cliffs we have recently passed. The view from the sea is refreshing beyond measure; and in the calm of a summer's evening, the music of thousands of birds, nestling in those green recesses, floats over the waves, and is heard far from the shore, while the breath of flowers and fragrant plants sweetens the air, whither, to use an expression of Lord Bacon's, "it comes and goes like the warbling of music."

We have now noticed some of the principal scenes and objects on the coast of the Isle of Wight. In our next Supplement we will describe some parts of the interior of the island, which offers to the tourist, and to the pedestrian in particular, such a number of beautiful short excursions as is scarcely to be met with elsewhere.

The sort of tour we have here been contemplating, in its perfection supposes the party to have a boat at their own disposal for three or four days, during which they can leisurely observe all the points on the coast, being sure to find a comfortable little inn every night. The halts may be made at Yarmouth, or at the Needles Hotel (which is close to Alum Bay, to the rocks, and to all the finest of the coast scenery); at the Undercliff; and then at Ryde or Cowes. The trip may be prolonged, and easily shortened; but four days can hardly be spent in a more delightful manner by the lover of nature. If preferred, boats may be procured from point to point, those of Cowes and Yarmouth being particularly good. During the fine season of the year there are steam-boats, both from Cowes and Ryde, that make the voyage round the island in from eight to ten hours' time. This is a short, cheap, and delightful excursion for such as have not time for a more deliberate survey and examination of the beauties and phenomena of the Isle of Wight.

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PILGRIMAGE TO MARIAZELL.



[Pilgrimage to Mariazell.]

MARIAZELL is a small town in the Austrian province of Styria, and situated in the most romantic part of that mountainous country. A shrine and an ancient picture of the Virgin Mary, which is believed to be endowed with miraculous qualities, have given importance to the place, and annually attracted many thousands of pilgrims ever since the finding of the picture in the eighth or ninth century down to our own days. These devotees wend over moor and mountain not merely from all corners of Upper and Lower Styria, but from Carinthia; from Moravia and Silesia; from the Tyrol; from Bohemia; from Vienna, the capital; and from many other distant points of the Austrian empire.

The annual pilgrimage from Vienna is regulated by the government itself, which fixes the day of its departure always in the hot months of July or August. An imperial proclamation to this effect, and enjoining the pilgrims to pray before the shrine of the Virgin for the prosperity of the House of Hapsburg, is stuck up on the great gate of St. Stephen's. On the appointed day the devotees assemble in that Gothic cathedral at earliest dawn; at four o'clock in the morning high mass is performed, and then the long, picturesque line, consisting of all ages and of both sexes, separated into

divisions by religious banners and crucifixes, begins its toilsome march towards the rugged mountains of Styria; the pilgrims chaunting hymns as they go, and having their weary steps cheered from time to time by the music of trumpets and kettle-drums that are scattered along the line, at the head of the several divisions.

A recent traveller, who witnessed the scene in 1822, says, that the procession which he saw leave Vienna consisted of nearly 3000 persons, who were all of the poorer classes. Females predominated, and among the young women, who were numerous, he observed many who were exceedingly pretty, and looked very graceful in their pilgrim-weeds. Almost all of them were bare-footed; they carried long staves entwined with flowers, and wore, for the most part, straw bonnets with enormous brims, to protect their faces from the scorching rays of the sun. This female equipment varies very much in the different provinces, each of which has its distinctive costume; and this circumstance adds to the picturesqueness of the scene when pilgrimages from different parts meet at their common centre—the shrine of Mariazell.

The Vienna pilgrims generally return home on the fourth day after their departure. From whatever place

they may come, the pilgrims always ascend the rough mountain of Mariazell singing hymns to the Virgin; here the young women, taking off their straw hats or white linen caps, let their hair flow in loose disorder over their shoulders; and the sturdier pilgrims, to increase their penance and the natural difficulties of the way, drag huge, heavy wooden crosses after them up the steep ascent. On gaining the summit of the mountain, and the sight of the gloomy, antique church, the pilgrims all fall prostrate, and raise a universal and long-continued shout; after which they cross themselves, rise, and approach the shrine slowly and reverentially, singing as if with one voice, and making the mountains re-echo with their solemn and harmonious notes. The shrine is in a small and dark chapel in the very centre of the gloomy church; the chapel is dimly lighted by a single lamp, the ray of which is eclipsed by the glare of precious stones and metals that have been lavished there by the devotion or superstition of many succeeding generations. A massy silver railing guards the entrance to the shrine, and in front of this costly fence the crowded votaries kneel, and pray to a picture which they can scarcely see. In the rear of the chapel there is a stone image of the Virgin Mary, supported on a detached stone pillar. At most seasons this pillar is surrounded by a double circle of pilgrims; the inner one consisting of females, all on their knees—the outer circle only of men, leaning on their long staves. At the evening hour, which in Catholic countries is sacred to the Virgin—at the pensive, twilight *Ave Maria*, the scenes in the church are romantic and picturesque.

As Mr. Russell entered the church, "The sun was just going down behind the bare precipices of the neighbouring mountains, and the pilgrims were arranged to await the signal for chaunting the *Ave Maria*. The aisle in which they were assembled was cold and sombre; the weak rays of light, passing through the stained glass of a large Gothic window, covered them with a hundred soft and varied tints, and not a whisper disturbed the solemn silence, except the indistinct murmur of prayer from the holy chapel. At length the sun disappeared, and the bells gave the signal for the evening service. The young women in the inner part of the circle immediately began to move slowly round the pillar on their knees, singing, with voices in which there was much natural harmony, a hymn to the Virgin; while the men stood still, taking up the burden at the end of every stanza, and bending to the earth before the sacred image."

When the church service terminates, other scenes not less romantic take place in the neighbouring woods. Although the town of Mariazell, which owes its existence to the favourite shrine, is composed almost entirely of inns and ale-houses for the accommodation of pilgrims, who come in larger or smaller bodies from all parts, and at all seasons of the year, except when the deep snows render the mountains impassable; and although they make use of beds somewhat similar in dimensions to our famed bed of Ware, and capable of holding a dozen persons, there is not in-door room enough for all at the periods of the great pilgrimages. Motives of economy also, and even of enjoyment in the fine, warm nights of summer, may induce some to prefer the open air to the crowded hostels of the town; but, at all events, at that season hundreds, and often thousands, of the pilgrims bivouac in separate parties in the woods, where, after eating their suppers, they pass the greater part of the night in singing, one party replying to the chorus of another, and then another and another succeeding in distant and soft harmony. Among a people who almost universally cultivate music, and sing in parts or in chorus with taste and precision, the effect of this nocturnal concert of many voices may

be easily imagined. At the earliest dawn of day, parties drawn out in long file, and marching two by two, begin to emerge from the woods and from the town; and at times go on increasing, until the mountain sides and the valley beneath seem dotted all over with the white caps and white dresses of the female pilgrims, who, come whence they may, always greatly exceed the men in number.

Thus far we have only looked at the picturesque and agreeable side; but, we regret to add, the pilgrimage of Mariazell has darker and less pleasing features. The poor engaging in it often spend in a few days the hard-earned gains of many months; drinking and other debaucheries are not uncommon; beer and brandy-booths exist in the wood, and even all about the sacred shrine; and the singing in the woods by night is not confined to hymns to the Virgin, nor are the words of the profane songs always so pure as their music. Formerly quarrelling and fighting were not unfrequent occurrences. The women of Gratz, the capital of Styria, that annually sent a numerous train*, and the women of Vienna, were rivals in beauty; and this their jealousy of each other, by involving their devoted admirers of the other sex, led not only to a tearing of caps and bonnets, but to more serious encounters among the men. To prevent these scandals and disorders, the government commanded that the two pilgrimages should take place at different times, so as to prevent the fair ones of Gratz and Vienna from meeting in such powerful belligerent bodies. The reforming emperor, Joseph II., abolished the pilgrimage from Vienna altogether; but it was restored and encouraged by Francis I., the late Emperor of Austria. Joseph, indeed, was very severe in this matter; for he not only seized most of the treasury of Mariazell, but even melted down the silver images of his own mother and brothers and sisters, which had been hung up there before the shrine, as votive offerings, by his mother herself, the Empress Maria Theresa.

CORPOREAL AND INTELLECTUAL PLEASURES.

(From Dr. Southwood Smith's 'Philosophy of Health.')

THE appetite for food, and the voluntary actions dependent upon it, may be considered as the first advancement beyond a process purely organic. The function by which new matter is introduced into the system and converted into nutriment, is partly an animal and partly an organic operation. The animal part of it consists of the sensations of hunger and thirst, by which we are taught when the wants of the system require a fresh supply of aliment, together with the voluntary actions by which the aliment is introduced into the system. The organic part of the function consists of the changes which the aliment undergoes after its introduction into the system, by which it is converted into nutriment. Sensations always of a pleasurable nature arise indirectly in the manner already explained, from the due performance of the organic part of the function; but pleasure is also directly produced by the performance of the animal part of it. Wholesome food is grateful; the satisfaction of the appetite for food is pleasurable. Food is necessary to the support of life; but it is not indispensable to the maintenance of life that food should be agreeable.—Appetite there must be, that food may be eaten; but the act of eating might have been secured without connecting it with pleasure. Pleasure, however, is connected with it, first directly, by the gratefulness of food, and secondly indirectly, by the due digestion of the food. And the annexation of pleasure in this twofold mode to the performance of the function of nutrition is another case of the gratuitous bestowment of pleasure; another instance in which pleasure is communicated for its own sake, and rested in as an ultimate object. Pleasures of this class are sometimes called low; they are

* "The pilgrimage to Mariazell," says Baron Riesbeck, a German traveller of the last century, "is a ceremony half religious and half profane, with which the women of Gratz are highly delighted. Their lovers generally accompany them there."

comparatively low; but they are not the less pleasures, because they are exceeded in value by pleasures of a nobler nature. Man may regard them with comparative indifference, because he is endowed with faculties which afford him gratifications superior in kind and larger in amount; but it is no mark of wisdom to despise and neglect even these; for they are annexed to the exercise of a function which is the first to exalt us above a merely organic existence; they are the first pleasures of which, considered merely as sentient creatures, we are susceptible; they amount in the aggregate to an immense sum; and they mark the depth in our nature in which are laid the fountains of enjoyment.

Organs of sense, intellectual faculties, social affections, moral powers, are superadded endowments of a successively higher order; at the same time, they are the instruments of enjoyment of a nature progressively more and more exquisite.

An organ of sense is an instrument composed of a peculiar arrangement of organized matter, by which it is adapted to receive from specific agents definite impressions. Between the agent that produces and the organ that receives the impression, the adaptation is such, that the result of their mutual action is, in the first place, the production of sensation, and, in the second place, the production of pleasure. The pleasure is as much the result as the sensation. This is true of the eye in seeing, the ear in hearing, the hand in touching, the organ of smell in smelling, and the tongue in tasting. Pleasure is linked with the sense; but there might have been the sense without the pleasure. A slight difference in the construction of the organ, or in the intensity of the agent, would not merely have changed, it would even have reversed the result; would have rendered the habitual condition of the eye, the ear, the skin, not such as it now is in health, but such as it is in the state of inflammation. But the adjustment is such as habitually to secure that condition of the system in which every action that excites sensation produces pleasure as its ordinary concomitant; and the amount of enjoyment which is thus secured to every man, and which every man without exception actually experiences in the ordinary course of an ordinary life, it would be beyond his power to estimate were he always sensible of the boon; but the calculation is altogether impossible, when, as is generally the case, he merely enjoys without ever thinking of the provisions which enable him to do so.

But if the pleasures that arise from the ordinary operations of sense form, in the aggregate, an incalculable sum, how great is the accession brought to this stock by the endowments next in order in the ascending scale—namely, the intellectual faculties!

There is one effect resulting from the operation of the intellectual faculties on the senses that deserves particular attention. The higher faculties elevate the subordinate in such a manner as to make them altogether new endowments. In illustration of this, it will suffice to notice the change wrought, as if in the very nature of sensation, the moment it becomes combined with an intellectual operation, as exemplified in the difference between the intellectual conception of beauty, and the mere perception of sense. The grouping of the hills that bound that magnificent valley which I behold at this moment spread out before my view; the shadow of the trees at the base of some of them, stretching its deep and varied outline up the sides of others; the glancing light now brightening a hundred different hues of green on the broad meadows, and now dancing on the upland fallows; the ever-moving, ever-changing clouds; the scented air; the song of birds; the still more touching music which the breeze awakens in the scarcely trembling branches of those pine-trees,—the elements of which this scene is composed, the mere objects of sense, the sun, the sky, the air, the hills, the woods, and the sounds poured out from them, impress the senses of the animals that graze in the midst of them; but on their senses they fall dull and without effect, exciting no perception of their loveliness, and giving no taste of the pleasures they are capable of affording. Nor even in the human being, whose intellectual faculties have been uncultivated, do they awaken either emotions or ideas; the clown sees them, hears them, feels them no more than the herds he tends: yet in him whose mind has been cultivated and unfolded, how numerous and varied the impressions, how manifold the combinations, how exquisite the pleasures produced by objects such as these!

And from the more purely intellectual operations, from

memory, comparison, analysis, combination, classification, induction, how still nobler the pleasure! Not to speak of the happiness of him who, by his study of natural phenomena, at length arrived at the stupendous discovery that the earth and all the stars of the firmament move, and that the feather falls to the ground by the operation of one and the same physical law; nor of the happiness of him who sent his kite into the cloud, and brought down from its quiet bed the lightning which he suspected was slumbering there; nor of the happiness of him who concentrated, directed, and controlled that mighty power which has enabled the feeble hand of man to accomplish works greater than have been feigned of fabled giant; which has annihilated distance; created by economizing of time; changed, in the short space in which it has been in operation, the surface of the habitable globe; and is destined to work upon it more and greater changes than have been effected by all other causes combined; nor of the happiness of him who devoted a longer life with equal success to a nobler labour, that of REARING THE FABRIC OF FELICITY BY THE HAND OF REASON AND OF LAW. The intellectual pleasures of such men as Newton, Franklin, Watt, and Bentham, can be *equalled* only by those who possess equal intellectual power, and who put forth equal intellectual energy: to be greatly happy as they were, it were necessary to be as highly endowed; but to be happy, it is not necessary to be so endowed. In the ordinary intellectual operations of ordinary men, in their ordinary occupations, there is happiness. Every human being whose moments have passed with winged speed, whose day has been short, whose year is gone almost as soon as it seemed commenced, has derived from the exercise of his intellectual faculties pleasures countless in number and inestimable in value.

But the sympathetic pleasures, out of which grow the social, are of a still higher order even than the intellectual. The pleasures that result from the action of the organic organs, from the exercise of the several senses, and from the operation of the intellectual faculties, like the sensations in which they arise, belong exclusively to the individual being that experiences them, and cannot be communicated to another. Similar sensations and pleasures may be felt by beings similarly constituted; but the actual sensations and pleasures afforded by the exercise of a person's own organs and faculties are no more capable of becoming another's than his existence. These, then, are strictly the selfish pleasures; and the provision that has been made for securing them has been shown.

But there are pleasures of another class, pleasures having no relation whatever to a person's own sensation or happiness; pleasures springing from the perception of the enjoyment of others. The sight of pleasure not its own, affects the human heart, provided its state of feeling be natural and sound, just as it would be affected were it its own. Not more real is the pleasure arising from the gratification of appetite, the exercise of sense, and the operation of intellect, than that arising from the consciousness that another sentient being is happy. Pleasures of this class are called sympathetic, in contradistinction to those of the former class, which are termed selfish.

Meaning of the term Cannel Coal.—I observed large quantities of the Cannel coal, and took some pains, both here and subsequently at Kendal, St. Helen's, and other places, to obtain the meaning of the term. A considerable quantity is procured at St. Helen's, though the greater quantity comes from Wigan. It is dug out of the same shafts with ordinary coal, but exists in different seams. It appears to be a substance between ordinary coal and jet. In Liverpool and elsewhere, it is advertised by boards and placards—"Coal and cannel sold here." It is invariably spelt "Cannel." If it have really taken its name from Kendal, the people of the town are not aware that it has any such origin; neither is there any reason that it should originally have been called *Canal coal*, it having been dug before canals were adopted, and transported together with larger quantities of ordinary coal. It seems to be the general opinion that, having been used to light the men at their work, and serving as *candle*, it became by corruption "*Cannel*" coal. It is singular how soon words and phrases creep into use, and totally obliterate every recollection of the cause that produced them.—*Sir George Head's Home Tour through the Manufacturing Districts.*

SUGAR FARM IN JAMAICA.



[A Jamaica Sugar Farm.]

AN account of the sugar-cane, and the mode of extracting its juice, and converting it into sugar, having already appeared in the 'Penny Magazine,' No. 4, we shall now endeavour to describe the general economy of a West India sugar plantation.

According to Bryan Edwards, a sugar estate is commonly divided as follows:—one-third in canes, one-third in pasturage, and one-third woodland. A portion of land is appropriated to the cultivation of plantains and other esculent vegetables, which, with salt-fish and such small stock, chiefly pigs and poultry, as they can raise for themselves, constitute the chief support of the negroes. The woodland part of the estate furnishes a supply of building timber and fire-wood. It has been calculated that a plantation yielding on an average 200 hogsheads of sugar annually, and 130 puncheons of rum, each containing 110 gallons, must consist of about 900 acres. While the coffee plantations are situated in the high grounds, the sugar-cane is grown in the plains. The former are seldom much injured by a dry season, as some rain falls in the higher regions during the greatest droughts; but they are, on the other hand, exposed to the devastating effects of hurricanes. The sugar plantations, though they more frequently escape the fury of these winds, oftener suffer from want of rain.

The chief buildings on an estate of about one thousand acres are a water-mill, and in the absence of water-power, a mill or couple of mills worked by mules; a boiling-house, containing copper clarifiers, and other pans or boilers; a curing-house, sufficient to hold one-half the crop, and containing a cistern for molasses of the capacity of 6000 gallons; a distillery house,

with stills, cisterns, pumps, and other necessary apparatus, and containing convenience for storing the stock of rum; two trash-houses, open at the sides; a hospital for the sick negroes, with a separate room for lying-in women, and another for the disorderly; store-rooms for securing the plantation utensils and provisions; shops for carpenters, coopers, wheelwrights, and blacksmiths; a stable for about sixty mules, with a corn chamber above. There is besides the dwelling-house of the overseer; and the book-keepers and other whites have an establishment to themselves.

The late Mr. Lewis, in an interesting journal written during a visit which he paid to his estates in Jamaica, has given descriptions of West India scenery, of which we are glad to avail ourselves in this account. The houses of the planters, he says, are generally built and arranged on the same model; namely, of wood, partly raised upon pillars, and consist of a single floor. A long gallery, called a piazza, terminated at each end by a square room, runs the whole length of the house. On each side of the piazza is a range of bed-rooms, and the porticoes of the two fronts form two more rooms, with balustrades and flights of steps descending to the lawn. A veranda runs round the whole with shifting Venetian blinds to admit the air; except that one of the end rooms has sash windows on account of the rains, which, when they arrive, are so heavy, and shift with the wind so suddenly from the one side to the other, that all the blinds are obliged to be kept closed; consequently the whole house is in darkness during their continuance, except the single sash-windowed room. These constitute the whole house, except a few store-rooms and a kind of waiting-hall; for none of the domestic negroes

sleep in the house, all going home at night to their respective cottages and families.

The houses in which the negroes reside are also described by Mr. Lewis. They are composed of wattles on the outside, with rafters of wood, and are well plastered within and whitewashed; they consist of two chambers, one for cooking and the other for sleeping, and are in general well furnished with chairs, tables, &c., a four-post bedstead, and plenty of bed-clothes; for, in spite of the warmth of the climate, when the sun is not above the horizon, the negro always feels very chilly. Some of the villages in which they reside are quite picturesque. Each house is surrounded by a separate garden, and the whole village is intersected by lanes, bordered with all kinds of sweet-smelling and flowering plants. The vegetables of the negroes are all cultivated in their provision grounds, which are filled with a profusion of oranges, shaddocks, coconuts, and peppers of all descriptions. Besides the profits arising from their superabundance of provisions, which the better sort of negroes sell to a considerable amount, they rear a large stock of poultry, and pigs without number.

The life and animation which pervade a West India plantation are, according to Mr. Lewis, equal to that of an English farm-yard, and in some respects it is even superior. The following is a picture which he draws of the former:—All the tradespeople are dressed either in white jackets and trowsers, or with stripes of red and sky-blue. One band of negroes is carrying the ripe canes on their heads to the mill; another set is conveying away the trash after the juice has been extracted; flocks of turkeys are sheltering from the heat under the trees; the river is filled with ducks and geese; coopers and carpenters are employed about the puncheons; carts drawn some by six, others by eight oxen, are bringing loads of Indian corn from the fields; the black children are employed in gathering it into the granary, and in quarrelling with pigs as black as themselves, who are equally busy in stealing the corn whenever the children are looking another way.

The stock on a plantation of from 900 to 1000 acres, according to Edwards, would consist of 250 negroes, 80 steers, and 60 mules, and the total value of the estate, including land, building, and stock, would be about 30,000*l.* The rate of profit on a sugar-farm was calculated by allowing 10*l.* per annum for every negro employed in that department of the plantation. Cotton, indigo, coffee, cacao or chocolate, pimento and ginger are generally staple articles of cultivation on a sugar estate, though their produce taken collectively is comparatively of much less importance than that of the sugar-cane.

Under the system which existed prior to the 1st of August, 1834, when the plan of emancipation came into operation, the use of the lash to the extent of thirty-nine strokes was uncontrolled by any penal enactments. There were drivers of the gangs, from whom the negroes while at work in the field often suffered more severely than from the regular punishments. The negroes on an estate usually went to their labours in three sets or gangs. The first consisted of the most healthy and robust of the men and women, who were chiefly occupied, out of crop-time, in clearing, holeing, and planting the ground, and in crop-time in cutting the canes, feeding the mills, and attending to the manufacture of the sugar. They were summoned to their work before sunrise by a bell, or the blowing of a conch-shell, and brought their provisions with them. The annual profit arising to the owner, from the labour of each able field negro employed in the production of sugar, was usually averaged at 25*l.* The number of negroes of the first class, excluding domestics, carpenters, and other artizans, on a well-managed estate, was generally in the proportion of one-third to the whole number of negroes em-

ployed. The second gang, composed of boys and girls, convalescents, and others of a weakly frame, was employed in weeding the canes and other light work; and the third set, consisting of young children, attended by an elderly negro, was engaged in weeding the gardens or some such exercise, to keep them in employment.

Many allowances must be now made for the effect of the recent changes which have taken place in the social state of the West India Islands. The plan of emancipation will occasion great changes in the management of landed property, and the system is already in a state of transition, and has begun to receive modifications which it much needed. The Marquis of Sligo, under whom the process of emancipation is carried on in Jamaica, in some interesting 'Memoranda' which he transmitted to the Colonial Office about a year ago, says, in the fifteenth paragraph, "that the manufacture and cultivation of sugar has hitherto been conducted on the most antiquated systems possible, and has received the least possible assistance from the modern improvements in machinery. The plough is hardly ever used: where adopted this year, from absolute necessity, it has answered completely. The cattle-mills, which are so general, must be abandoned, as they work so very slowly that they cannot meet the diminished hours of labour of the free gangs." The people of this country, who consume upwards of 403,200,000 lbs. of sugar every year, are much interested in any improvements which will reduce the cost of production. A diminution of price, amounting to 1½*d.* per lb., would occasion about 2,520,000*l.* a-year to be directed into other channels. The consumers would not only be benefited by this saving, but other branches of productive industry would receive a stimulus.

Under the momentous plan of emancipation now in progress in the British Colonies, more than half a million of our fellow-creatures will, in a few years, be raised from slavery to a state of freedom. The accomplishment of this act of justice will cost the people of this country the sum of 20,000,000*l.* The application of this money merely releases the slave; and training him to act his part with usefulness as a free labourer must depend on a variety of circumstances, which it is impossible to watch over without strong feelings of sympathy. The manner in which the negro emerges from his present condition will determine whether the change is so advantageous to him in a merely physical sense as it might be made. There are two situations which would be equally prejudicial to his future advancement. The principle of self-dependence must be firmly rooted in the mind, otherwise the labourer will be free in name rather than in fact. The next danger is, lest he should be transformed into a miserable member of a cottier population, in which case, satisfied with a bare existence, and stimulated by no laudable hopes to look beyond the supply of his daily wants, the negro would continue, under other circumstances, in the same state of degradation in which a long course of slavery has placed him.

The emancipation from slavery must be complete, and the habits of dependence thoroughly eradicated; and then the change will be productive of the blessings which were sought for by its promoters. Maria Theresa abolished personal slavery and attachment to the soil; and yet, says the Rev. Professor Jones, in his 'Theory of Rent,' "the authority of the owners of the soil over the persons and property of their tenantry has been very imperfectly abrogated. The necessities of the peasants oblige them frequently to resort to their landlords for loans of food; and they become laden with heavy debts, to be discharged by labour. The proprietors retain the right of employing them at pleasure, paying them, in lieu of subsistence, about one-third of the actual value of their labour." In 1791 Stanislaus

Augustus granted the privileges of personal freedom to the Polish peasantry; but as the mere promulgation of an ordonnance could not raise them from their state of dependence on the lords of the soil, they showed, says Mr. Jones, "no very grateful sense of the boon bestowed upon them. They feared they should now be deprived of all claim upon the proprietors for assistance when calamity or infirmity overtook them. It is only since they have discovered that the connexion between them and the owners of the estates is little altered in practice, and that their old masters very generally continue, from expediency or humanity, the occasional aid they formerly lent them, that they have become reconciled to their real character of freemen." Burnett, in his 'View of the Present State of Poland,' published a few years ago, says,—“The Polish boors are, in fact, still slaves.”

It is satisfactory to learn that, in the case of the West India slaves, there have been displayed an energy of purpose and a feeling of self-reliance which promise much for the happy issue of the plan of emancipation. The value of their labour has increased, and the good feelings which begin to actuate them have been evinced in a most gratifying manner. The dispatches of the Marquis of Sligo from Jamaica, where there is a slave population of 310,707, describe the negroes as “working cheerfully for hire, both night and day,” and daily improving in their demeanour; and he is of opinion that, having once enjoyed the advantages of money payments, they will not be induced to relinquish them. One of the special justices reported to his Lordship, that, at Oxford estate, the negroes had dug, in stiff unploughed land, 113 holes per day, during the time in which, under the apprenticeship system, they worked for their employers solely, while 70 holes had been the allotted task during slavery. The number of hours, as settled by the law, in which each apprentice is bound to labour for his former owner is $7\frac{1}{2}$ per day, or 45 per week. The negroes are afterwards at liberty to enter into agreements for working task-work with any one who will employ them. The agreements to this effect are entered in a book, and seen and approved of by one of the special magistrates.

Some benevolent individuals have proposed, that, at the expiration of the term of apprenticeship, the negroes should be settled on allotments of land. This would be one of the surest means of creating an abject population. The climate would indispose the negroes to any exertions beyond satisfying the claims of hunger; the vices which a long course of slavery has fostered would continue to flourish, and others would be engendered scarcely less degrading in their effects, which would in time become interwoven in their character, and prove more difficult of cure than those arising from the single source of slavery. In a pamphlet published by Mr. B. T. Young, a West India proprietor, the project for granting allotments to the negroes is placed in its true light. The peculiar circumstances of the population being taken into account, he shows:—that land allotments upon a small scale would be injurious, and must engender pauperism, particularly upon an exhausted soil. He refers to Ireland, and the militia tenantry in the West Indies, who have held allotments for a century and a half for militia service, and who are in consequence in a wretched condition, both morally and physically, as instances strongly proving his position. Mr. Young insists upon the necessity of attending to the education of the negroes; and he concludes his exertions for their amelioration with the following recommendation:—“Give the negro the benefit of a savings' bank, where he may safely deposit the fruits of his honest industry, which of itself would inspire an interest in the soil; and, above all, instruct him that the acquisition of property can only be accomplished by a long course of honest industry.”

THE BRITISH MUSEUM.—No. I.

THE nature and objects of the British Museum have been repeatedly adverted to in the 'Penny Magazine.' But the description of the institution is not complete; and as considerable interest has been recently attached to the subject, from the investigations of a Committee of the House of Commons (Sessions 1835-1836), a few papers are intended to be devoted to a brief view of its origin, history, and present state, with reference, of course, to what has been already given.

The term “Museum” appears to have been first applied to a public institution in Alexandria in Egypt. This was the college or retreat of learned men attached to the celebrated Alexandrian Library. It was called the Museum [*μουσειον*] as signifying a place where the arts and sciences were studied, typified by the mythological personages the Muses. The word has passed into general use, to express a collection or repository of rare and curious things in nature and art, arranged for the purposes of study.

No collection, such as we would now term a museum, could well be formed in England, while the country was in an unsettled state. The monasteries were the repositories of books and MSS., and the castles or strongholds of the nobility contained family muniments and records, such as title-deeds, marriage-settlements, &c., but these were frequently scattered by war and confiscation. The Tower of London alone contained anything approaching to what may be termed a national collection. In the latter part of the sixteenth century, and during the seventeenth, a taste or desire for collecting books, manuscripts, coins, and curiosities, began to spread amongst such as had the means to gratify it; but the taste, except with a few, was quite unformed, and delighted more in accumulating what was valueless or absurd, if it were rare or singular, than in gathering stores which would contribute to the advancement of knowledge.

Probably the earliest collector in England of such objects as are now held necessary to constitute a museum, was John Tradescant, who was gardener to Charles I. This individual had travelled over a large part of Europe, and is conjectured to have visited Egypt and other oriental countries. In his travels he collected plants and seeds, and curiosities of every kind. He had a botanical garden at South Lambeth, where he had also a house, in which his curiosities were deposited. This was called Tradescant's Ark; it contained specimens of minerals, birds, fishes, insects, and plants, as well as coins and medals, and a variety of things then considered uncommon rarities. Tradescant's Museum was much celebrated in its day, and was favoured not only by the visits of the nobility and gentry, but by many benefactions from them, a list of which latter is given in a work which he published, entitled 'Museum Tradescantianum, or a Collection of Rarities preserved at South Lambeth, near London, 1656.' From this book it would appear that the Tradescants (father and son) had used great industry and activity in bringing together a large and valuable collection, though, from the state of knowledge at the time, there were a number of absurdities admitted into it. “Zoology,” says Mr. Pennant, “was in their time in a low state, and credulity far from being extinguished; among the eggs was one supposed to have been the egg of the dragon, and another of the griffin. You might have found here two feathers of the tail of the phenix, and the claw of a ruck, a bird able to truss an elephant.” The Museum of the Tradescants passed into the hands of Elias Ashmole, the founder of the Ashmolean Museum at Oxford.

To Sir John Cotton, the grandson of the founder of the Cottonian Library, may be fairly attributed the merit of commencing what is now the British Museum. He certainly has the credit of setting the example of establishing a national institution. His

grandfather, Sir Robert Cotton, was born in 1570. During his lifetime he was in high repute as an antiquary, and was much esteemed in the courts of Elizabeth and James I. His favourite study and pursuit was the collecting of ancient records, charters, and other valuable manuscripts, in which he displayed considerable judgment. The library which he formed was preserved and augmented by his son and grandson, the latter of whom offered it to the government for the public use, reserving to the Cotton family an interest in it. This offer was accepted, and an act (the 12th and 13th Will. III. c. 7) was passed, providing for its care. The preamble of the act states that "Sir Robert Cotton, late of Connington, in the county of Huntingdon, Baronet, did, at his own great charge and expense, and by the assistance of the most learned antiquaries of his time, collect and purchase the most useful manuscripts, written books, papers, parchments [records], and other memorials in most languages, of great use and service for the knowledge and preservation of our constitution, both in church and state, which manuscripts and other writings were procured as well from parts beyond the seas as from several private collections of such antiquities within this realm, and are generally esteemed the best collection of its kind now any where extant." The act, after mentioning the augmentation of the library by the son and grandson of Sir Robert, vests the MSS. "together with all coins, medals, and other rarities and curiosities in the said library," in trustees, who were to "nominate and appoint a good and sufficient person, well read in antiquities and records," as librarian. Six years afterwards another act was passed, (the 6th Anne, c. 30,) in which it is stated that since the passing of the previous act "very little hath been done in pursuance thereof to make the said library useful to the public, except what has been done lately at her Majesty's charge." The reason of this is explained to be that the library was kept in the family mansion of the Cottons, and that there were difficulties in the way of rendering it generally accessible. Cotton House was therefore vested in the crown, (a consideration being made to the family,) in order that "it may be in her Majesty's power to make this most valuable collection useful to her own subjects, and all learned strangers."

Sir Hans Sloane was born in Ireland in the year 1660. He went out, when a young man, to Jamaica, as physician to the Duke of Albemarle, who had been appointed governor. The premature death of the duke deprived him of his situation: but during a brief residence in the West Indies he formed a collection of plants, valuable at the time, for the botany of these islands was then unknown. This was the commencement of his museum. In the course of a very long life, chiefly spent in London, he rose to great eminence in his profession, was created a baronet by George I., and succeeded Sir Isaac Newton in the chair of the Royal Society. His successful professional career brought him an ample fortune, by which he was enabled to gratify on an extensive scale his taste for collecting. Before his death, the idea of preserving his museum entire, and of purchasing it for the nation, was frequently discussed, and it was known that by his will he intended to make the offer. Accordingly, on his death, in the beginning of 1753, in the 92nd year of his age, little difficulty was experienced in procuring an act of Parliament, sanctioning the purchase of the museum for 20,000*l.*, which passed the legislature towards the end of that year. The same act directed that the collection of manuscripts made by Robert Harley, Esq., afterwards Earl of Oxford, and his son, (now known as the Harleian collection,) which was then offered for sale, should be bought for the sum of 10,000*l.*; that the Cottonian collection should be added to the Sloanean and the Harleian, the whole to be placed in a suitable depository, and to be called the British Museum.

The manner in which the money was proposed to be raised by the act of 1753, for the purpose of purchasing Sir Hans Sloane's museum, the Harleian collection, and for defraying necessary expenses, was most objectionable. "The act directed that 100,000*l.* should be raised by way of lottery, the net produce of which, together with the several collections, was to be vested in an incorporated body of persons, selected from the first characters in the kingdom for rank, station, and literary attainments, upon whom it conferred ample powers for the disposal, preservation, and management of the institution*." How little could the true interests or dignity of science have been then understood, when, instead of voting the required sum from the public purse, it was resolved to raise it "by way of lottery!" The natural consequences followed; there was management and jobbing and dishonesty in the transaction, which required and received a parliamentary investigation.

"Amongst the other vices," says Tindal, "in which the people of England were plunged at this time, a universal spirit of gaming, which had seized all ranks and degrees of people, was not the least. * * * In the act for the lottery for purchasing Sir Hans Sloane's curiosities, the legislature had been at unusual pains to guard against the pernicious consequences of one person engrossing a great number of tickets, by which he was able to put what price he pleased upon them, to the great detriment of the public, through their insatiable passion for gaming. A provision therefore was inserted in that Act, that no person should be allowed to contribute towards the lottery for more than twenty tickets. Another provision was likewise inserted for keeping the subscription open to the 26th of October from the 14th of June, that foreigners might have an opportunity of purchasing tickets. Notwithstanding all these precautions, the subscription was declared to be full in a few hours after it was opened, and the rise of the tickets above the true value was as high as ever. The notoriety of all this was such, that Mr. Cooke complained of it in the House of Commons, and moved that the book, entitled 'An Account of the Contributors to the Lottery, directed by an Act of the last Session of Parliament,' be referred to the consideration of a committee. Though this motion met with some opposition from Sir William Yonge and others, yet it was carried in the affirmative without a division, and a committee was appointed to examine the book, and with power to send for persons, papers, and records. During this examination, it appeared that Mr. Leheup, one of the receivers of the contributions to the said lottery, had not, as such, conformed himself strictly to the terms required by the Act of Parliament, and, amongst other contraventions of it, that he had sold to one person, under names which he knew to be fictitious, between 200 and 300 tickets. Upon this the committee came to no fewer than eighteen resolutions against Mr. Leheup, and voted him guilty of a direct violation of the Lottery Act, and a breach of trust, and that an humble address be presented to His Majesty, that he will be graciously pleased to direct his Attorney-General to prosecute, in the most effectual manner, the said Mr. Leheup for his said offences. * * * The event of all was, that Mr. Leheup, being prosecuted by the Attorney-General in the Court of King's Bench, was fined 1000*l.*, which he immediately paid."

Thus a measure having for its object the improvement of the national taste was accompanied by another which tended to degrade the national character. The lottery, however, produced a large sum of money. After deducting various expenses of management, the net amount was 95,194*l.* 8*s.* 2*d.* The trustees of the Museum bought Montague House, in Great Russell Street, Bloomsbury, which had been erected by the

* 'Penny Cyclopædia,' article BRITISH MUSEUM, No. 328.

Duke of Montague, for which they paid 10,250*l.*; and here the different collections were brought. The Museum was opened for study and public inspection on Jan. 15, 1759, about six years after the passing of the act.

Up to the close of the eighteenth century, the British Museum was but little known, except to literary and scientific individuals. The great bulk of the people had yet to be interested in it, as indeed they had to be interested in anything relating generally to their intellectual improvement. Yet this period, during which the Museum may be said to have been in its infancy and youth, was marked by extraordinary accessions to our knowledge. It was the period when Cook, Solander, and Banks explored the southern seas;—when Black, Priestley, Cavendish, and Watt made and applied their discoveries;—and when the Hamiltons, Charles Townley, and others, made those collections which have tended so much to the advancement of the fine arts. The war retarded the progress of the Museum in the earlier part of the present century, but it could not check the impulse which had been communicated to the public mind. From the year 1807 we find a steady progressive increase in the interest taken in the Museum by the public, as evinced by the number of visits paid. The parliamentary return for that year gives the number of visitors at 13,046; in 1814 we find it stated at 33,074; in 1818 it was 63,253; it fell below that number till 1821, when it is stated at 91,151; in 1825 and 1826 the numbers are 127,643 and 123,302: but the commercial distress of that period appears to have reduced the numbers in 1827 to 79,131. In 1830, previous to the impulsion given by cheap literature, the numbers were 71,336; in 1832 it rose to 147,896; and the numbers each year since are—1833, 210,495; 1834, 237,366; 1835, 289,104.

One of the witnesses examined before the recent Parliamentary Committee says, "There is one important feature with respect to the British Museum in the mind of the public that I am much pleased with—the general good feeling exhibited by them on all occasions. * * * There is also, I may observe, no scribbling about the Museum; and the only instance in which I found any remark made, was by some ignorant man who wrote with a piece of red chalk on the bannisters leading to the King's Library, 'Museum.'" The same witness, on being asked for information as to the comparative behaviour of the public of the present and of a former day, replied—"The British Museum has only become very popular within the last few years—time was when we had not more than 200 visitors a day; we have now 2000, 3000, 4000, 5000, and sometimes 6000 visitors a day."

The government of the Museum is vested in forty-eight trustees, by different Acts of Parliament. Of these ten are family trustees, representing the different families whose ancestors have left to it large bequests. There are two Cottonian trustees, two Sloane trustees, two Harleian trustees, the Earl of Elgin is trustee for the Elgin family, and the Townley and Knight families have each a representative. The tenth family trustee is appointed by the king. There are twenty-three official trustees, who become so by virtue of their offices. These trustees are the Archbishop of Canterbury, the Bishop of London, the Speaker of the House of Commons, various Members of the Government, the Chief Justices of King's Bench and Common Pleas, the Master of the Rolls, and the Presidents of the Royal Society, Royal Academy, College of Physicians, and Society of Antiquaries. The remaining fifteen trustees are elected by the others.

Respecting this constitution, the Parliamentary Committee say, in the Resolutions which they have lately laid before the House of Commons, that they "do not recommend any interference with the family trustees, who hold their offices under Acts of Parliament, being

of the nature of national compacts;" and with respect to the others, that "though the number of official trustees may appear unnecessarily large, and though practically most of them rarely, if ever, attend, yet no inconvenience has been alleged to have arisen from the number. But they add, "If any act of the Legislature should ultimately be found necessary, a reduction in the number of this class of trustees might not be unadvisable." As to the elective trustees, they suggest the propriety of the other trustees, when vacancies occur, occasionally conferring "a mark of distinction upon men of eminence in science, literature, and art," by associating them in the trusteeship.

Hot Water.—Having said much about wine, I will not omit all praise of hot water, the efficacy of which, on many occasions in life, is very great, and cannot be too generally known. I will begin with a remarkable cure effected by it on myself. Many years ago, when I was labouring under what I supposed to be an attack of common sore throat, I rode some miles on horseback, with a north wind in my face. I then got into the mail, and travelled nearly 200 miles; and at the end of my journey I could scarcely speak or swallow. In the morning I was still worse, and on attempting to force down a little coffee, I found it utterly impossible. In this extremity a physician, now among the most eminent of his profession, called upon me partly through accident. He told me I had got a very bad quinsy, and he immediately ordered a kettle of hot water, recommending me to gargle with it as hot as I could bear, and continually. As we were on intimate terms, and he was only then commencing practice, he remained with me two or three hours to enforce his prescription. I found so much benefit, that after he was gone I persevered till night, at which time I was enabled to take food without difficulty; and in the morning there was no trace whatever of the attack, nor have I ever experienced another, though I was told it would most probably be the case. The medicine ordered me I did not taste, and the sole glory of my rapid and complete cure is due to the hot water. I have never had even a common sore throat since, or I should certainly try the same remedy, though I never heard of its being so applied. In bruises I have found hot water most efficacious, both by means of insertion and fomentation, in removing pain, and totally preventing discolouration and stiffness. It has the same effect after a blow. It should be applied as quickly as possible, and as hot as it can be borne. Very cold water, applied immediately, will produce the same effect, though for a different reason. I was told the other day, by very high authority, that insertion in hot water will cure that troublesome and very painful thing called a whitlow. The efficacy of hot water in preventing the ill effects of fatigue is too well known to require notice. I should think where water cannot be procured, that in the case of a bruise or a blow, immediate and continued friction with the hand would partly answer the purpose, by keeping up the action of the vessels. I infer this particularly, because I once avoided any inconvenience from a very severe bruise by keeping myself in vigorous action. As I was crossing Smithfield at a quick pace, on my way to my office, I ran against a bar, and struck myself above the knees with such violence, as to make me stagger. The pain was very great, but as I had no time to lose, and there was no vehicle at hand, I hurried on at first with much difficulty, but by degrees more easily. The distance is about two miles, and on my arrival all sensation of pain was gone, nor was there afterwards either stiffness or discolouration. If I had not kept in action, I am sure I should have felt the effects of the blow for a very long time. It may be useful to some people to be informed, that sealing-wax dropped upon the hand will cause no injury beyond momentary pain, if it is suffered to remain till quite cold.—*The Original, by Thomas Walker.*

[Mr. Walker probably supposed that there was an essential difference between a common sore throat and a quinsy, whereas quinsy is merely a name given to the bad cases. There is this difference, however, in the treatment; in mild cases it is usual to attempt to resolve the inflammation; in very severe ones it is perhaps advisable to promote suppuration as Mr. Walker's physician did; for when the abscess bursts the patient is instantly relieved.]

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BYLAND ABBEY.



[Byland Abbey, Yorkshire, from a Drawing by W. Westall, A.R.A.]

BYLAND ABBEY is in the North Riding of the county of York, and not more than five miles from Rievaulx Abbey, a description of which was given in the 'Penny Magazine,' No. 271. As the history of each of the monastic establishments which were once so numerous in England generally contains some indications of the manners and habits of early times, and affords data for showing the changes which have taken place in the state of society, we shall give a brief account of the old abbey at Byland from the records of one of the abbots, which may be seen at greater length in Dugdale's 'Monasticon.'

Byland Abbey appears to have been founded in the twelfth century, by Roger de Mowbray, at the instance of his mother. The abbot and twelve monks of Furness Abbey, in Lancashire, having been disturbed by the incursions of the Scots, fled to York, where they were for some time entertained by the archbishop, by whom they were recommended to the protection of De Mowbray. Being a minor, however, his mother received them at her castle, and she afterwards sent them to a near relation of her own, who had been a monk at Whitby, but who then led an eremitical life at Hode. Here she supplied them with necessaries until her son attained his majority, when he granted them a sufficient portion of land for their support. The monks soon afterwards procured, at a general chapter

of their order, held in France, an exemption from their former subjection to Furness. They remained at Hode several years, when, on the ground that their former grant did not afford them sufficient space, the church and town of Byland were granted to them for the purpose of building an abbey. Here they were too near the abbey of Rievaulx, being within the sound of its bells; and as there were some other inconveniences attached to the place, De Mowbray granted them another piece of land, on which to erect their monastery; and they then built a small church, a cloister, and houses. Their possessions were soon considerably increased, and they added to the value of them by clearing the woodland and draining the marshes. They removed, in 1177, a little to the eastward, where the abbey of Byland, the remains of which are represented in the cut, was built and dedicated to the Virgin Mary.

At this period the pope exercised great authority over the ecclesiastical affairs of England, and the monks of Byland seem to have received various privileges from the head of the church. Pope Alexander III. exempted them from paying tithes for such lands as they owned or rented; Gregory II. from payment of tithes on the produce of mines which they held in their own hands; and other popes confirmed them in the enjoyment of these privileges. King Henry II. specially favoured the abbey with his protection, and granted the

monks and their servants freedom from tolls in all cities, boroughs, markets, fairs, bridges, and ports in England and Normandy; and Henry III. conferred on them secular jurisdiction in their manors of Sutton and Clifton in Yorkshire, and at Wardecop in Westmoreland.

It is not at all surprising that wealth flowed in upon the monastic establishments. They were compelled, as a matter of necessity, to pay attention to the cultivation of the soil; for there were few towns; and the division of employments had not extended in such a manner as to render it safe for a body of men, placed in a secluded part of the country, to depend for the necessaries of life upon the surplus produce of the agriculturist. They might, perhaps, have been supported by the free-will offerings of the devout; but when the gifts which were made them consisted almost wholly of land, it was much more natural that they should attempt to improve it by cultivation; and as there did not exist a large class like the present race of tenant-farmers until the period just preceding the Dissolution, agricultural pursuits were forced in some measure upon the religious communities. To this occupation they would bring a greater degree of intelligence than the other classes of society possessed; and the improvements which were slowly introduced in agriculture would most probably be frequently discovered, or at least practised at an early period in the monastic granges. Information circulated among these communities from one end of Europe to the other, and a constant interchange of ideas was kept up by means of general chapters of each order,—by pilgrimages, and various necessities connected with their common interests. The skill which they possessed as agriculturists there is every reason to conclude was superior to that of any other class; and the gardens attached to the monasteries occupied much attention, and exhibited the earliest improvements in that useful department of husbandry. The consequence was that the religious houses increased in wealth, and, becoming more secular, they lost their empire over the religious sentiments of the age, and were regarded with jealousy by the parochial clergy. The monks were liberal and hospitable. They relieved the poor, were moderate in the rents which they exacted, and took no excessive fines in the leases which they renewed. But at the Dissolution they had outlived the useful purposes to which they were once subservient. The better education which the laity were beginning to receive qualified them for state employments, and ecclesiastics began to lose the direction of public affairs. The influence of the monastic orders also declined in consequence of the increased activity of society, opening to the laity more frequent opportunities of pursuing a career of usefulness. The laity multiplied books, and in the walks of literature and science pressed upon the heels of the churchmen. In time the latter ceased to be the exclusive lights of the age. Pope Ganganelli remarked:—"The religious orders have not been gifted with infallibility nor with indefectibility. If they were to be all abolished this day the loss would be great, but the church would neither be less holy, less apostolical, nor less respectable."

The general measures which preceded the dissolution of the monasteries have been described in No. 271 of the 'Penny Magazine.' When Henry VIII. consulted with his council on this subject, one was of opinion that "there is a due place left for monasteries; yet, when they grow to that multitude, that either the just proportion they bear in a state is exceeded, or they become a receptacle only for lazy and idle persons, it is fit to apply some convenient remedy. Therefore be pleased, Sir, not to think so much of their overthrow as their reformation." Another of the council remarked, that "the clergy had one-fourth part of all the revenues of the kingdom; that this was an undue proportion; and

that two or three monasteries left in every shire would be sufficient." The result was that the first blow at the monastic institutions was aimed only at the smaller monasteries, which were the least able to offer resistance; but the whole were soon afterwards surrendered.

Byland Abbey was not included in the number of monasteries which were first dissolved, and by the king's letters-patent, dated January 28, 1537, it was refounded; but two years afterwards it was surrendered, when the abbot and monks received pensions. There were seven bells in the abbey, and it contained 516 ounces of plate. The lead which was stripped off the building amounted to 100 fodder, and, with the bells and plate, was sold for the king's use. The gross income of the institution was 295*l.* 5*s.* 4*d.*; the net income 238*l.* 9*s.* 4*d.*

Mr. Moore, an antiquarian who visited Byland Abbey about the year 1789, states that it is of a date and style of architecture nearly coeval with Rievaulx, and that it is nearly five miles distant from it across a moor, from which, in descending a steep hill, the prospect of a fine country and of this abbey opens itself, and presently leads to the village. All that remains of Byland is comparatively a fragment, but it is sufficient to show that the abbey must have been a fine specimen of church architecture. The doorway is richly ornamented and the windows elegantly formed.

The district around Byland, although so near the Durham coal field, has hitherto been imperfectly supplied with this necessary article; and coal has been brought at a great expense from Boroughbridge, where it arrives by a long course of navigation on the Aire and Calder canal, and the river Ouse. The formation of a railway, which will soon be opened, from Whitby to Pickering, which place is nearer Byland than Boroughbridge, will be of great importance to the district, as Whitby is within a very short distance of the mouth of the Tees. The price of coal will probably undergo a reduction, which will enable the poorest families to increase their consumption. On the other hand, better means for disposing of agricultural produce will be afforded, which cannot fail to have a beneficial influence on the condition of the population. The woods which the old monks of Byland cleared, and the marshes which they drained, aided the progress of the community in their day; but in this country the effect of those operations has long since ceased and can never be renewed; and other causes are in activity, which are destined to carry on still further the work which those men commenced.

ANECDOTES OF A DOG.

[From a Correspondent.]

ALTHOUGH innumerable instances are already on record of the wonderful sagacity of the dog, two or three anecdotes connected with a faithful "follower and friend" of mine, during my residence in the backwoods of North America, may be found not uninteresting.

During my early residence there, a neighbouring farmer supplied me with a puppy from a breed of mongrels, in whose favour he spoke volumes, although there was but little in their form calculated to make a favourable impression upon such as were strangers to their intrinsic merits. This puppy grew up a fine smooth-haired, coal-black fellow, excepting the tips of his toes and tail, and a star-like spot upon his breast, which were snowy white. I named him "Hector." His first exploit was the pursuit and death of a wild doe, and I then thought it would have been his last. It was one afternoon in the latter part of December that I heard young Hector's voice in a small enclosure behind our cottage; and looking abroad to see what the matter was, I indistinctly perceived, through the fast-falling snow, a fine young deer bounding along

towards the adjoining woods, and Hector in full and joyous pursuit. He had then never seen or hunted a deer that I was aware of; but his voice was soon lost in the distance, for he was nearly as fleet as the bounding deer. I anxiously awaited his return, but he came not; and as he had never been beyond the limits of the cultivated part of my farm since he was brought to me when a puppy, I naturally concluded that he could have no knowledge of the localities of the surrounding forests. When night came on and he returned not, I felt a strong inclination to set off in quest of him; but the rapid approach of darkness, and the increasing violence of the snow-storm, deterred me from making the attempt, which must have been in vain. I did, however, venture a short distance into the woods, where I whistled loud and long, and raised my voice amidst the contending elements—but all to no purpose. Night came on, and hour after hour passed away, but Hector came not; and when, about midnight, I visited his kennel for the last time, I found it still unoccupied. I then gave him up for lost,—and a loss of fifty times his value, in a pecuniary point of view, would not have caused me one-half the regret that I then experienced. With returning day my faithful follower had not returned; but the snow-storm had subsided; and an hour afterwards, to the great delight of myself and our little household (for the dog was a general favourite), he was descried wending his way homeward across an adjoining meadow. Where, or how he had spent the night, I knew not; but, in the course of the day, a hunter called on me to say, “That, early in the morning, he had gone into the woods in pursuit of deer; when, in crossing a deep ravine, at the distance of about three miles from my dwelling, he had accidentally fallen in with my young dog—which he immediately recognised—just leaving his night’s lair by the side of a bloody deer, which, from appearances, he had hunted down.” My informant further stated, that he had flayed the animal, according to the regular custom of hunters, and hung the carcass upon a tree,—and that I might, if I chose, send for my share of the venison, to which, by the law of hunters, I was entitled. I thanked him for the information he had given me, but declined receiving the firstfruits of my dog’s achievements.

There was a small lake near my cottage, covering a space of seventy or eighty acres, and surrounded on all sides by dark woods, except a moderate space opposite to my dwelling, from which I had caused the timber to be cleared away, in order to obtain an unobstructed view of the lone and silent waters. In spring and autumn the lake was frequently visited by flocks of various sorts of wild-ducks, when one of my favourite amusements was the shooting of them from the covert of the surrounding trees, or from a canoe in which I used to go in pursuit of them. Hector, in all these adventures, was my constant attendant, and seemed to enjoy the sport as much as his master: and although, in his appearance, there was nothing to indicate that he belonged to any breed of dogs partial to the water, yet from his days of puppyism he delighted to be dabbling in that element. A long gun-shot was but a moderate distance for him to swim to a dead or wounded duck, which he never failed to bring safely ashore and deposit at my feet. Sometimes, when a duck was wounded, but still able to dive, he would exercise a wonderful degree of cunning, when he found his utmost exertions in swimming were unavailing; for, after the bird had dived a few times, to elude his eager pursuit, he would sink himself as low as practicable in the water, with but his nose and eyes above the surface, and thus paddle silently and slowly towards his victim;—when the duck, not fully aware of what was approaching, would make little effort to retreat; and the dog, taking advantage of some moment of inattention on the other’s

part, would plunge forward and seize it in his capacious jaws. I have actually known him to seize ducks in this manner that had not been wounded or hurt in any way, but which seemed to apprehend no mischief from a countenance so mild and honest.

His partiality for sporting in the water exceeded anything I remember to have seen or heard related; for if I should happen to be otherwise engaged when a flock of ducks appeared on the lake, Hector would exhibit signs of extreme impatience for a time, and then set off alone in pursuit of them. But he did not confine himself to game of the feathered species, for he would wade and swim for hours together along the margin of the lake in pursuit of the numerous shoals of sun-fish, which, in summer, inhabited the shallow bays and inlets. His success, however, as a fisher was but very limited; for amidst all his watchings and snatchings he seldom succeeded in bringing any of the finny tribe to land.

Near to the barn and stables was a small streamlet, that issued from a bed of shelving rocks in the immediate vicinity, and which, for the convenience of supplying the farm-stock, was collected into a small pool. Although this water was cold and pure, yet, as the warm season advanced, I always found it infested by numerous frogs, and I could devise no means to prevent it. Hector, in his younger days, had witnessed my endeavours to destroy them, and ever afterwards he would spend several hours of a warm summer-day eagerly intent on catching the poor frogs. And here he succeeded much better than among the sun-fish; for he would use his feet in dislodging them from their hiding-places, and when they rose to the surface of the water he seldom missed seizing them. This was rather an ignoble amusement, certainly,—but it served to fill up his hours of idleness.

I will not dwell upon his numerous and heroic achievements among the wolves, deer, otters, foxes, &c., but I will relate his last battle, and its melancholy consequences. It was about noon of a hot summer-day, while employed in my garden, that our maid-servant came running to inform me that Hector was fighting with a strange dog, and that she was afraid he would kill it. I desired her to return quickly, and to get a stout riding-whip that hung in the entrance-hall and hasten to the rescue, and that I would follow her instantly. She did so;—but upon my reaching the place where the dogs had been quarrelling—and the distance I had to go was scarcely one hundred paces—there lay the strange dog,—a lifeless thing! I could scarcely credit what I saw, so short a time had elapsed to bring about the catastrophe. There stood Hector, at a short distance, sullen and thoughtful,—intently gazing at the victim of his fury, until I took the whip from the astonished girl and drove him off to his kennel. Half an hour afterwards we were seated at the dinner-table, when my attention was drawn again to my favourite dog, on observing him busily engaged in carrying off his dead enemy, which he was able to do with extreme difficulty, for the animal was at least two-thirds of his own weight. He contrived, however, to drag it to a piece of ploughed land at a considerable distance; where, close to the remains of the stump of an old pine-tree, he dug a hole sufficiently large for the grave, and having deposited it there, he dexterously covered it over with the earth he had displaced. From that hour he seemed dull and thoughtful, and on the fourth day he became seriously indisposed. From the first moment of his illness I was apprehensive that it might terminate in hydrophobia, and during the few days he lived the symptoms fully developed themselves. I confined, for I could not find in my heart to destroy him; but when death put an end to his sufferings, on the evening of the fourth day of his illness, I felt relieved and thankful.

NORWEGIAN PEASANTRY.

[Concluded from No. 282]



a, b, c, d, e, f, g, h, i, k, l, m, n, o, p, q.
 a, b, d, e, f, Fille-Fields; c, i, Ourdal; g, h, j, l, m, Bergen; n, o, q, Tölster; p, Christiania.

THE general neatness of their dress and abodes has been much remarked. "The peasants," says Coxe, "are well clothed and well lodged, and appear to possess more comforts and conveniences than any which I have seen in the course of my travels, excepting in some parts of Switzerland." Their cottages are universally built of the solid trunks of pines, the interstices between which are closely stuffed with moss. In the colder parts of the country they have double wooden walls. This additional protection renders them warm and secure against the blasts of winter. The roofs are generally formed of the same materials as the walls, but are covered or coated in a variety of manners. Sometimes they are loaded with a thick compact coating of pebbles—sometimes they are covered with large strips of the bark of the birch tree, which from its oily nature resists wet, and will last for years. In nearly all cases large fragments of rock are put upon the roof to prevent the whole from being blown away. It is not uncommon to see the roofs sowed with grass and bearing a luxuriant crop, and in some instances trees of a tolerable size grow on the house-tops. In the districts of Hedemarken and Guldbrandsdalen, where the valleys are exceedingly fertile, and most industriously cultivated, the small farm-houses of the peasants exhibit a degree of neatness and comfort rarely to be met with in other countries. Every cottage window has its neat white curtains, made of coarse muslin or gauze; they are externally a good deal ornamented with carving, and the doors are generally painted with flowers done in very lively colours. The peasants all through Norway strew the floors of their bed-chambers with the young tops of the juniper tree, that diffuse a pleasant fragrance, which is said to invite sleep in the most agreeable manner. Their beds are generally in recesses that can

be closed up like cupboards or presses, as is the case in so many Scotch cottages.

Living as they do, for the most part, remote from towns and villages, in their little farms scattered among the mountains, or at the ends of long fiords, frequently at the distance of many miles from their nearest neighbours, the Norwegian peasants are obliged to turn their hands to everything, and from necessity and practice they generally obtain a skill and address in many mechanical arts that are altogether surprising. Mr. Twining and Sir Arthur de Capell Brooke mention organs, perfect in their parts, with a variety of stops, that had been made by common peasants; and they describe that class generally as being very expert in the art of carving in wood. The close grain and beautiful whiteness of the fir render their talents in this way very ornamental to their cottages, both within and without. Most of their table utensils are of the same wood, and prettily carved. Specimens of their spoons and ladles, which are sometimes executed in an ancient style of carving, might, according to De Capell Brooke, serve as patterns to our own artists and silversmiths. Most of them can execute little works in silver, copper and iron, and make, or at least keep in repair, their rustic clocks and watches; but every one of them is his own carpenter and joiner—his own tailor, shoe-maker, &c. Near Drontheim Mr. Twining saw some wooden bridges they had thrown across the river Guulelf, and its tributary streams, that were remarkable for the elegance of their construction and the span and boldness of their arches.

They are very fond of music, and make their own simple instruments. The most common of these, and one which is much used in all the pastoral districts, is called the *Luur*. It is the same as the *Alphorn* of the

Swiss mountaineers. Bishop Heber calls it a cow-pipe, and says it is an instrument five feet long, made out of the bark of the birch-tree, with a rude but not unmusical sound. One which Mr. Twining examined was made of two pieces of wood, of the wild pine, hollowed out and tied together with twigs of osier. He describes its notes as singularly soft and clear, but their effect was no doubt heightened by scenery and circumstance. "I ran out of my rustic chamber," he says, "and directing my steps in the direction of those sweet sounds, I soon saw by the side of a cabin on the very margin of the lake, a young girl, holding in her hand a long wooden trumpet. The instrument had ceased at my approach, but at my request the young peasant again blew her *luur*, and produced notes still clearer and more harmonious. She executed with a remarkable facility several motives with frequent variations; but she often stopped, and every pause was filled by other distant sounds that appeared to come from a wooded cliff on the opposite side of the lake. I was not certain whether this was the echo of the strong and clear sounds I had heard, or a reply to them, made by some shepherd hid in the wood; but I presently discovered that the airs were different, and then I suspected that the maiden had come out of her cottage to reply with her horn to the notes sent across the waters by a brother or a friend." The peasants also make a sort of guitar with five strings. In the valley of Driostuen, where he says the greatest simplicity of manners reigns, "in some respects almost approaching Arcadian elegance," Heber found a girl playing on this instrument to call some calves up from pasture. After a little solicitation she let him hear several tunes, most of which were lively. On being asked to sing, she refused because it was Sunday: but on a sign from her father she ran to fetch her elder sisters, and a little brother, who began singing psalms very agreeably, till the old man and an elder son joined the chorus, "which," says the Bishop, "they did with the true parish-clerk twang."

At their rare festivals and social meetings the peasants amuse themselves with singing and dancing. Many of their songs are patriotic, and sung to simple and touching airs. Their favourite dance, called the "Polisk," is generally kept up the whole of the night to the merry sound of the fiddle. "This," says Sir A. Brooke, "is the national dance of Norway, and is performed with a degree of spirit and enthusiasm I never before witnessed. The manner of dancing is this. Each of the men, taking his partner by the left hand, runs round the room at a pretty sharp kind of trot, rather than step. The lady, during this, occasionally whirls round by herself, with the same kind of movement as is practised by our young ladies in the quadrille, and her partner does the same. The Polisk dance then begins, which consists in a very rapid whirl, something similar to the waltz; but the motion far more violent, and the time entirely different. It is excessively difficult to perform, on account of the quickness of the whirl, and the necessity there is, nevertheless, of keeping the exact time. It is a highly amusing dance, and the eagerness with which the Norwegians hasten to join in it when the Polisk is played shows their extreme fondness for it."

We regret to be obliged to add, that at these merry-makings, drunkenness—the vice of the north—is by no means uncommon, both sexes drinking a coarse kind of brandy to excess. They are, however, very good-natured in their cups; quarrelling or fighting, which too generally attend such carousings, rarely or never take place among them, but all passes off in perfect mirth and good-humour. The occasions, too, are rare, only occurring once a year, on the feast of St. John (*Sanct Hansdag*), and at some betrothal or wedding. Couples are generally betrothed several years before the marriage takes place.

Among their common amusements in winter is wolf-hunting, which is not merely a pastime, but a useful and necessary operation to keep the country clear of those ravenous animals, which swarm in many parts. One of their methods is very droll:—parties go out in sledges, having a little pig in each sledge: when they get among the woods and rocks, they tread upon its tail, or pinch it, to make the pig squeak;—this noise presently attracts the wolves, that sometimes rush out in such troops that even good shots are in danger. They also hunt the bears, which are numerous in many parts of Norway; and they follow up this sport with remarkable spirit and address. The bears do a deal of mischief, not only killing cattle, but destroying corn: they rarely attack men. At all seasons the shepherds in the mountains are followed by large dogs, something like the Newfoundland species, armed with collars set with iron spikes, to protect them against the wolves, that frequently attack them, and endeavour to seize them by the throat. The bears, on the contrary, usually fly from the dogs.

In the long winter season, when hill and vale are covered with snow, and the rivers and lakes frozen over, they make distant journeys in sledges, going with extraordinary rapidity, and straight forward, like the flight of the crow, instead of being obliged, as in summer time, to proceed circuitously round the heads of their rivers and lakes, or to wait on the shores to be slowly ferried over them. By the usual summer route it is nearly 400 miles from Christiania to Drontheim,—by the winter route the distance is reduced nearly one-half, and this is performed with inconceivable velocity over lake and mountain, the traveller vying in speed with the troops of hungry wolves that follow his track. Another and a more independent and almost equally rapid way of travelling at that season is by skating. The *skies* of the Norwegians are very different from our skates, being, indeed, a union of the skate and the snow-shoe. They are made of a hard wood, and are from six to eight feet long by six inches broad: the left *skie* is shorter than the right, to enable the skater to turn more quickly in wheeling. The feet are firmly fixed in them at about the middle of the *skie*. The skater holds in his hand a long staff, with which he directs his course, and accelerates it occasionally by pushing it against the snow. Underneath, the *skies* are covered with seal-skin, or pieces of a rough boar's hide, the hairs of which being turned backwards give a hold on the snow which is necessary in ascending mountains. It is on the level ground—still more on the clear ice of the lakes—but most of all on the steep descents of the mountains, that play is made with the *skies*, and a rapidity of motion produced which, in the last case, may be compared to the headlong speed of a cataract or an avalanche. When the snow is in good condition, the peasants do not hesitate to descend the steepest precipices in this manner. Mr. Twining says, that the use of the *skies* is familiar to every Norwegian, without distinction of age or sex;—that it is upon them the dispersed inhabitants of isolated cottages repair in winter time to church, traversing plains, hills, and arms of the sea, and saving at times three or four leagues of the distance they are obliged to travel at other seasons.

But the most striking circumstance connected with the Norwegian *skie*, is its adoption by a whole regiment of militia, raised among the peasantry and the miners of Röras, who are called the *Skiclöbere*, or Regiment of Skaters. "Two battalions," says Bishop Heber, "of about 600 men, stationed in the north and south of Norway, are drilled in the winter on skates; these men are only called out twice a year, but they have frequent private drills for recruits. When they exercise in skates they have their rifles slung, and carry a staff in their hands, flattened at the end to pre-

vent its sinking into the snow, and to assist them in the leaps they are sometimes compelled to take when going down hill (which we were told they do with wonderful rapidity) over such obstacles as obstruct their progress. The only difference in their method of drawing up is, that in winter they allow between the files room to turn in the skates, which they do by changing the right foot by an extraordinary motion, which would seem to dislocate the ankle." To this information Sir A. de Capell Brooke adds—

"The *Skjelöbere* have frequently been employed with great success against the enemy in the wars with Sweden. Indeed, an army would be completely in the power of even a handful of these troops, which, stopped by no obstacle, and swift as the wind, might attack it on all points; while the depth of the snow, and the nature of the country, would not only make any pursuit impossible, but almost deprive them of the means of defence, the *Skjelöbere* still hovering round them like swallows, skimming the icy surface, and dealing destruction upon their helpless adversaries." In summer the *Skjelöbere* have nothing to distinguish them from a common rifle corps; their uniform is light green.

Like most mountaineers inhabiting wild and romantic regions, and leading solitary lives, the peasants of Norway are rather superstitious. They believe in several evil spirits, called by the general name of *Neiss*, that frequent lonely places, and appear under a variety of forms; some of them, like "the spectre hound in Mann," show themselves in the shape of a large, rough, white dog, with very long ears. The lake of Dillingen, according to their tales, is the favourite residence of Noeck, the kelpie of Norway, though he sometimes shows himself in other parts of the country. He is described as a being of great malevolence and strength, that appears in the form of a large black horse. Should a bold peasant succeed in bridling him he is said to become a very useful animal, and to serve his master faithfully. This odd information was given to Heber by an English servant, married in the country, who added that a relation of his wife's had told him seriously that he had himself seen Noeck in harness, quietly drawing a plough; but the moment the bridle was taken off, he galloped away with prodigious violence and noise, plunged into the lake, and disappeared! Of fairies, the most pleasing part of a fanciful creation, they seem to have no notion; they apply the old Gothic name of *Dvergar*, by which fairies were universally known in the north, to merely mortal dwarfs. They have a confident belief in presages of death by supernatural lights and mystic noises heard at the dead of night. They have a great dread of witchery and sorcery, and in their apprehensions the poor Finns, or Laplanders, retain their old reputation; and are still potent diviners and sorcerers, that can call up spirits by the beat of drum, and kill a man by shooting an arrow towards him, though he be a hundred leagues off. The peasants are not yet quite convinced that those destructive little quadrupeds, the lemmings, which appear so suddenly, are not rained down from heaven; and the fishermen on the coast still believe in the existence of the kraken, or measureless sea-serpent, which many of them vow they have seen with their own eyes.

The costume of the peasantry varies in different parts of Norway; nearly every district has a dress of its own, and while some of these are picturesque, the very variety is a source of pleasure to the eye of the traveller. It is evident that several of these dresses have undergone no change of fashion for centuries. Von Buch was at first astonished at the apparition of young people in the garb of his great grandfathers and great grandmothers; and De Capell Brooke was equally surprised one evening, when he found himself suddenly surrounded at a mountain village by a number of pretty girls, who had just rushed out from the dance, wearing

very high-heeled shoes, and waists that would have vied in length with those of four centuries ago. In some parts the women have their hair *snooded* in a large knot on the crown of the head, and in fair weather wear nothing over it but a very white and clean handkerchief, tastefully arranged. In other districts the hair is quite concealed under a close lace cap, covered with a quantity of ribands.

Mr. Twining, whose journey was chiefly directed in search of the picturesque, and who looked at these things with the eye of an artist, gives some notes on costume, which will be rendered more intelligible by his designs, which we have copied here. He says it is in Ourdal that the dress of the peasantry begins to have a picturesque and national character. The men wear a very short vest, and a large bonnet, sometimes blue, but more generally red. Their hair is light brown, and worn very long. Some of the smart young villagers adorn their jackets with double rows of metal buttons, with embroidery, and silver clasps. They all have a leather girdle round the waist, in which they generally carry a large knife, called a *dolkknif*. With this *dolkknif* they carve in wood, and perform many other offices. According to Pontoppidan, a Norwegian clergyman, who wrote a history of his country in the early part of the last century, the peasants were then very quarrelsome, and often used the *dolkknif* in their disputes. Indeed, he says that this was so much the case, that a wife was always supposed to carry her husband's shroud about her whenever they went to a wedding feast, or other merry-making; and that in consequence of frequent stabbing, the custom of carrying knives was forbidden. It now appears, however, from a variety of authorities, that their temper is improved, and that, though they carry the knife, such a bad use of it is exceedingly rare.

Generally speaking, the women of Ourdal have no other *coiffure* than a long and beautiful head of hair, which at times is disposed in two large tresses that fall behind, at others left loose and unbound to float round the neck and cover the shoulders with its thick curls. They generally wear a camisole, or vest, of a grey colour, which descends a little below the waist, and is buttoned in front; when this is not used they wear long white sleeves, and a very small corset, which rises behind between the shoulders. This latter is not unlike the well known costume of the female peasantry of the Canton of Berne, in Switzerland; but instead of the piece of black velvet round the neck used by the Bernois, the fair Norwegians wear a sort of cravat, precisely the same as that worn by the men. In Gulbrandsdalen the women wear enormous buckles, which make a clinking noise as they walk, and such high-heeled shoes, that they have quite a gigantic appearance. Their dress consists of a loose chemise, coarse but clean, which is tied round the throat, and of one dark coloured petticoat, without stays or anything else. But in cold weather they put on a camisole, or waistcoat without sleeves, made exactly like that of a man. Their hair, snooded round with tape, and tied back from the forehead, falls over the neck and shoulders in long ringlets. The dress of the mountaineers in the neighbourhood of Bergen is exceedingly picturesque. The women are distinguished by the variety of their head-dresses, which serve as a sure index to the villages they belong to. Some wear a large white handkerchief, which is drawn out into wings on either side—some wear a high singularly shaped cap—others wrap their hair in a sort of turban, made of red cotton or red flannel; the vest is generally of a bright red colour—the corset yellow, and most of them use a girdle round the waist, ornamented in front with a clasp and plate of copper. The men in many parts wear long thick beards. A coarse plaid cloth, like the Scotch, manufactured by the peasants themselves, is in pretty general

use, and the men also wear garters of very lively colours tied in large bows at the knees.

In other and higher essentials—in language, manners, feelings and intelligence, the Norwegians bear a striking resemblance to the Scotch and the people of the north of England.

STATISTICS OF CRIME IN ENGLAND.

STATISTICAL details have a forbidding appearance to the ordinary reader; yet they are of the highest value; in the hands of an intelligent person they disclose much that would be forgotten or unknown, and enable us to draw conclusions from statements which otherwise would have no object. Suppose two individuals were to fall in with such an apparently trifling and worthless document as a tavern bill of the time of Shakspeare. One regards it as of no more value than a tavern bill of the year 1836; the other considers it attentively; he refers to the value of money and the price of provisions of the age to which the document belongs, and is, perhaps, enabled to draw sound conclusions as to the domestic habits of our ancestors, when compared with those of the present day.

In No. 202 of the 'Penny Magazine,' there is a paper entitled Remarks on the Relation between Education and Crime. This is a highly important subject. It is not to be disposed of within the compass of a few paragraphs. Nevertheless, whatever assists us in arriving at just conclusions respecting it is of use; and with this view the following statements are submitted. They are taken from a paper read on the 20th of June last, at a meeting of the Statistical Society of London, by S. Redgrave, Esq., and published in their Proceedings. Those who may wish to follow out the subject are referred to the 'Companion to the Almanac,' especially the volume for 1836, in which there is a paper on the state of crime in the United Kingdom:—

"The author observed that, for the purposes of statistical inquiry, crimes may be properly divided into two classes—those punishable respectively on indictment and on summary process. In the present paper the former are alone included, as, of summary convictions, though now forming a very considerable branch of the statistics of crime, there does not exist any comprehensive and precise information that could be made available in an inquiry of this nature. The following calculations were stated to be founded upon documents prepared from the records of the Criminal Courts, which, though furnishing the best data that can be obtained, do not show the number of offences actually committed, (the only true test of the state of crime,) but the number of offenders only who have been proceeded against; and must therefore be more or less affected by the state of the police, the facilities afforded to prosecutors, and various local causes.

"The total number of persons charged with indictable offences at the Assizes and Sessions held during the year 1835 was 20,731, being in the proportion of 1 in 631 on the population as taken at the last census, or in England 1 in 637, in Wales 1 in 2345. The city and county of Bristol has the greatest proportion of offenders,—1 in 272; Middlesex stands next,—1 in 395; and there are two other counties coming within the proportion of 1 in 500—namely, Warwick 1 in 445, and Surrey 1 in 483.

"In the counties of Lancaster, Gloucester, Kent, Essex, Bedford, Oxford, Stafford, Norfolk, and Somerset, (giving them their due precedence in the ranks of crime,) the proportion is above 1 in 500, and under 1 in 600; in the counties of Hertford, Cheshire, Nottingham, Suffolk, Bucks, and Cambridge, it is above 1 in 600, and under 1 in 700; in the counties of Southampton, Leicester, Wilts, Sussex, Worcester,

Berks, Huntingdon, Hereford, Monmouth, Lincoln, Dorset, and Devon, it is above 1 in 700, and under 1 in 1000; in the counties of Salop, York, Northampton, Rutland, Derby, and Cornwall, it is above 1 in 1000, and under 1 in 1500; and, lastly, in the counties of Durham, Cumberland, Northumberland, and Westmoreland, the proportion is 1 in 1567, 1 in 1697, 1 in 1755, and 1 in 2201 respectively. The number of offenders in several of the Welsh counties is so small, and the proportion would be so materially affected by the commitment of two or three persons more or less, that it was considered useless to enter into the detail of the twelve counties. The average proportion, as before mentioned, was 1 in 2345—the maximum of crime being 1 in 1391 in Glamorganshire, and the minimum 1 in 8289 in Merionethshire.

"It was observed that the position assigned to many counties would be materially altered if the atrocity of the offences as well as their number be considered, and that perhaps the best test of this would be the proportion which the number of capital convictions in each county bears to the total number of offenders. The average for England and Wales is one capital conviction to every 39½ of the persons charged. In Bristol, where, comparing *the number of offenders with the population*, the proportion is the highest, the *proportion of capital convictions* is 1 in 215. In Middlesex, which stands next, it is 1 in 62½; in Warwick, which stands third, 1 in 26; in Lancaster, which stands fifth, 1 in 147; and in Gloucestershire, which follows Lancaster, 1 in 15. The counties having the greatest proportion of capital convictions are,—Berks 1 in 12, Wilts 1 in 16½, Northampton 1 in 19, Oxford 1 in 23, Norfolk 1 in 28, and Gloucester and Warwick just mentioned: the proportion for Wales is 1 in 24.

"The proportion in which the violent offences were committed in the several counties will also afford a test of their relative state with regard to crime. The average of offences against the person was 9.72 per cent. The proportion exceeded 12 per cent. in the counties of Monmouth, Oxford, Bedford, Gloucester, Northumberland, Hants, Worcester, and Hereford. In Middlesex and Kent it was within a fraction of 12 per cent. The average of violent offences against property was 6.53 per cent. In the counties of Worcester, Berks, Somerset, Warwick, Monmouth, Bucks, Bedford, Leicester, and Shropshire, it exceeded 10 per cent. In Oxford, Cambridge, Wilts, Chester, and Northampton, it approached very near to that amount. The malicious offences against property (offences characterized by the worst spirit which can prompt to the commission of crime) bear, fortunately, but a small proportion to the aggregate. They amount only to 0.75 per cent. Crimes of this nature have been of most frequent occurrence in the counties of Huntingdon, Bedford, Northampton, Glamorgan, Hertford, Leicester, Wilts, Sussex, Devon, Dorset, Lincoln, Stafford, Essex, Suffolk, and Gloucester.

"In offences against the person, the proportion acquitted and discharged was above 40 per cent., but, if some of the more heinous offences in this class are selected, it was far greater. In murder and attempts to murder (omitting those found insane) the proportion was 62 per cent. In rape and assaults with intent to ravish, 53½ per cent. In violent offences against property, 30 per cent. In offences against property committed without violence, nearly three-fourths of which are petty thefts, the proportion was 27 per cent. In the capital offence of arson, the proportion was higher than in any other. It amounted to above 84 per cent. In the malicious offences against property, the general proportion was 68½ per cent.; in forgery and offences against the currency it was under 22 per cent.: the small proportion of acquittals in this class being, it was suggested, most probably owing to the prosecutions

for offences against the coin being, with few exceptions, conducted by the solicitor to the Mint.

"Of the total number charged, 17,275 were males and 3,456, or 1 in 6, females. In offences against the person generally, the proportion of females was nearly 1 in 9; but in the offence of murder it amounted to 1 in $3\frac{1}{4}$, while in the attempts to murder, on the contrary, it did not much exceed 1 in $13\frac{1}{2}$. In the violent offences against property the proportion was only 1 in 20. In the offences against property committed without violence, the proportion rises to 1 in $5\frac{1}{3}$; and in forgery and offences against the currency to nearly 1 in 4.

"The proportion of females was greater in Devonshire than in any other English county, being 1 in $3\frac{3}{4}$. In Northumberland it was 1 in 4. In Lancashire nearly 1 in $4\frac{1}{2}$. In Middlesex the same. In Bristol 1 in 5, and in Surrey 1 in $5\frac{1}{2}$. The proportion was lowest in Oxfordshire,—1 in 21. In Essex 1 in 13. In Cambridge and Berks 1 in $12\frac{1}{2}$. In Hertford, Bucks, Leicester, Sussex, and Worcester, rather below 1 in 11.

"295 males and 51 females, forming 1.67 per cent. of the total numbers charged, were aged 12 years, and under; 1707 males and 303 females, making together nearly one-tenth of the whole, were aged 16 years and above 12, and 5257 males and 890 females were aged 21 years and above 16. It appears, therefore, that in the five years of life comprised between the ages of 16 and 21 crime is most prevalent; 42 per cent. of the violent offences against property, and 29.65 per cent. of the aggregate being committed by offenders whose ages fall within this comparatively short term. 5524 males and 1093 females were aged 30 years and above 21, a period including nine years. The ages of no less than 71.94 per cent. of the offenders do not exceed 30 years, after that age the number of criminals rapidly decreases; from 30 to 40 the proportion is 14.01 per cent.; from 40 to 50, 6.60 per cent.; from 50 to 60, 3.24 per cent.; and above that age 1.30 per cent.; so that there are fewer criminals by $4\frac{1}{2}$ per cent. in the whole period of life after the age of 30, than in the five years before attaining 21.

"With reference to the subject of education, the author adverted to an attempt which had been made to ascertain the degree of instruction of every criminal brought before the courts during the year, stating, that as this was an experimental inquiry, and attended with some difficulty, it was limited to their capability to read and write, to read only, or their inability to do either. The result of this inquiry showed that 8802 persons, equal to 42.46 per cent., could read and write; 4321, or 20.84 per cent., could read only; and 7070, or 34.10 per cent., were uninstructed.

"Of those who could read and write, 1 in $9\frac{1}{2}$ were females; of those who could read only, nearly 1 in $3\frac{2}{3}$ were females; and of those who were unable to do either, 1 in $5\frac{1}{3}$ were females.

"Omitting those counties where the number of persons is too small to show any results which may be depended upon, the greatest proportion of persons who could read and write was in Middlesex, 55.56 per cent.; Leicester, 53.46 per cent.; Durham, 53.08 per cent.; Hants, 52.72 per cent.; Cornwall, 51.45 per cent.; and Surrey, 51.44 per cent.

"The proportion was lowest, not exceeding 30 per cent., in Wilts, Hertford, and Bedford; and in Berks, Salop, Cambridge, Essex, Norfolk, Suffolk, Derby, and Worcester was under 35 per cent. In Warwick, Lancaster, Oxford, and Bucks it barely exceeded that percentage.

"The metropolitan county was stated to have the greatest proportion of instructed criminals, and also, with one exception, the greatest proportional amount of crime. But this, it was suggested, was not a result which could be generally established; for Lancashire,

which ranks next in amount of crime, has 7 per cent. below the average of instruction. Again, in Wilts and Hants, two adjoining counties similarly circumstanced in so many respects, and in the amount of crime nearly parallel, the proportion being 1 criminal in 714 in the former, and 1 in 717 in the latter, the results with respect to instruction are widely different. In Wilts the proportion of criminals who could read and write was lower than in any other English county, being only 27.46 per cent. In Hants it was 52.72 per cent., more than 10 per cent. above the average."

Squirrels in Fixed Cages.—The barbarous practice of "spinning a cockchafer," provided the tail of the insect be callous, and itself void of fear, during the operation, is not a more exquisite refinement in the art of tormenting than to confine a poor squirrel in a revolving cage. If there be one method more efficacious than another to deprive it of liberty, it is this very contrivance, whereby he is constituted the centre of a system;—a governor of Baratania, where, do what he will, he never can possibly be in a state of rest,—where, let him vary never so little, even for a moment, from his central position, everything begins tumbling about his ears. I have many times observed with pity the panting sides of an unfortunate little animal, its state of anxious tremor in its hall of torment,—its breath exhausted by galloping, kicking, and straining—worried and alarmed, without enjoying a single inch of progressive motion, or one refreshing change of attitude, for minutes together, within his tantalizing, turnabout treadmill. I know it will be said that the animal is happy, for that of exercise, the soul of nature, he has his fill. A man, pelted with mud, may believe he is hunting, or, lying on his stomach on wet grass, think it swimming, as reasonably as a poor squirrel, in the midst of a whirling maze of wood and iron, can enjoy liberty and the delight of running;—the dog, even confined by his chain, moves unmolested in a circle—the prisoner changes position in his cell;—home is home, be it ever so homely; but when the house itself turns round, its homeliness surely is destroyed altogether. I was led to these reflections when, walking in the streets of Hull, I observed a crowd of sailors busily employed in testifying their admiration and applause at some object of attention, by rude, unrestrained laughter, accompanied by many seaman-like phrases. As I approached, in order to ascertain the cause of their mirth, two squirrels were living amicably together in a common wire cage; such as is used generally for a thrush or a blackbird, furnished with perches in the usual manner, and fixed at the outside of a house, against a sunny wall. Never did a snorting horse, bounding, tossing back his mane, and galloping backwards and forwards, underneath and among the trees of an apple orchard, present a more striking contrast with the heart-broken, over-laden brute of a sandman, than at this moment these squirrels, by the variety of their movements, in comparison with the monotonous labour before alluded to; affording an exhibition that highly delighted the sailors, as particularly in accordance with their professional tastes and habits. The little creatures displayed, meanwhile, a perfection of animal activity no less pleasing to the general lover of nature and friend of the creation; each no longer the immovable centre of a circle, but figuring away in the periphery, and both together passing their hours in a state of happy companionship that baffles description. They threw summersets, ten or a dozen together, over each other's backs, and round the perches, one after another; and then suddenly they would stop and change the line of direction, passing each other contrary-wise, and forming both together in the air, while in rapid motion, a double figure of eight. Let anybody try the experiment, whether lord and master, or fair mistress of a squirrel—let pity be taken upon the little shadow-tailed inhabitant of the woods—let a new cage and a suitable companion be provided, and both together in return will regale the spectator with the exhibition of feats to baffle the imagination of Ducrow; and a combination of quickness, strength, and agility, such as no other earthly creatures possess in more infinite variety.—*Sir George Head's Home Tour through the Manufacturing Districts.*

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PALERMO.



[The City of Palermo.]

PALERMO, the capital of the island of Sicily, is beautifully situated on a gulf five miles in depth, and at the extremity of a natural amphitheatre formed by lofty mountains. The approach by sea is magnificent. Monte Pellegrino, lofty and picturesque in the extreme, stands over a narrow but most fertile plain, and seems posted there as a giant to protect the fair city, which in part stretches along the curving shores of the bay, and in part retires inland on some very gentle declivities, that are backed everywhere by pleasant hills, groves, and gardens. The force of language and metaphor has almost been exhausted to find expressions to describe the beautiful plain round Palermo; the *Conca d'Oro*, or the Golden Shell, expressive of its situation and richness; the *Hortus Siciliae*, or Garden of Sicily; the *Aurea Valle*, or Golden Vale; *Perla d'Italia*, or Pearl of Italy; *Felix*, or the Happy, with many others, have been applied to it. The town itself is not altogether unworthy of the site. It is regularly built, has some fine streets, and, taken on the whole, an air of elegance and solidity. Two principal streets, each about a mile in length, cross each other at right angles, and divide the city into four pretty equal quarters. At both ends of these two streets there is an ornamental *porta*, or gate, and at the point of

their intersection in the middle of the town there is a handsome octangular square, called *Piazza Vigliena*, or *Quattro Cantoneri*, from the centre of which there is a fine view of the two great streets, with the gates that terminate them. The northern gate, called *Porta Felice*, towards the suburb of the *Marina* and the sea, is richly ornamented, and has a very graceful effect. Besides this central square there are several other *piazze*, ornamented with obelisks and with fountains; the largest of these squares are, *Il Piano della Marina*, a space in front of the royal palace, and another near the senate house, which is occupied by a fine large fountain. The number of these public ornaments and luxuries, and the abundant supply of water, are immense advantages, and fully appreciated during the intense heats of summer. Most of the houses in the good part of the town have fountains, and water is conveyed even to the second and third stories.

The two great streets are well paved, and have *trottoirs*, or side pavements, those excellent provisions for the pedestrian which are too commonly neglected in continental towns. The houses are lofty, and nearly uniform in height; and were the two streets somewhat broader, they might be classed among the finest in the south of Europe: but, as it is, the *Cassero* is broader, longer,

and more regular than the famed Corso at Rome. Sicilian architecture, however, will not stand a comparison with the Roman. The movement, the activity, the constant animation of these streets, with the exception of an hour or two in the middle of the day in summer, when people retire to take their siesta, are exceedingly striking, and especially so to a traveller who comes from the interior of the country, or from any other town of the island, where everything seems languid and dull. Indeed, Palermo is the only city in Sicily that does not convey a melancholy idea of decay and depopulation. The lesser streets for the most part run parallel with the two main ones, and afford a ready access to them at all points. Some of the lower parts of the town are filthy, and excessively disorderly. There is a particular district, which is (or rather *was*) occupied by the *conciariotti*, or tanners and leather-dressers, that has obtained a bad name in history; for at every revolution, riot, or insurrection, its inhabitants distinguished themselves by their ferocity; whilst, even in peaceful, ordinary times, it was scarcely safe to pass through their streets, where an officer of police dared not show his face, and where criminals were harboured with impunity. It was, in short, a kind of Alsatia, as described by Walter Scott in his 'Fortunes of Nigel.' The *conciariotti*, at whose name the quiet citizens used to tremble, were incorporated and bound together by by-laws of their own making; besides which, they enjoyed as a body certain privileges and immunities *ab antico*. To offend one member was to make a quarrel with the whole nest of hornets, whose stings were sure and terrible. During the revolutionary proceedings of 1820, they barbarously massacred several of the Sicilian nobility; but had their ardour and nationality been properly directed, the Neapolitan army would never have entered Palermo. Since that time their district and dens have been well searched and cleared, their privileges utterly abolished, and the *conciariotti* seem to have become about as good subjects as the rest of the Sicilian populace.

The city is surrounded by an old, weak, and broken wall; some of the bastions are occupied by gardens, and others have been wholly cut away to increase the breadth of the Marina, a beautiful drive and promenade on the sea-shore. The port, however, is rather well defended by the citadel, Fort la Galita, and other works. There is a strong mole-head battery at the end of the mole, or pier, which forms the convenient port, and is in itself a noble work, running from the arsenal, for the length of a quarter of a mile, into nine or ten fathoms depth of water.

In the interior of Palermo one is continually reminded of the Saracens and the Normans, who successively held possession of Sicily, and whose styles of architecture, sometimes separate, and sometimes mixed, still survive them, and give a peculiarly characteristic air to the city which is hardly to be found anywhere else. In the royal palace, a spacious building, now the residence of the viceroys of Sicily, the Saracenic, or Arabic, and the Norman architectures are blended together in a most singular manner, and predominate over the whole, though modern additions and alterations—the mixing of the new with the old—give the edifice a patchwork sort of appearance. Attached to it is the beautiful little church of St. Peter, which, with its cryptic or underground chapel and superb mosaics, is quoted as one of the most perfect specimens extant of Saracenic taste and magnificence. In the armoury of the palace they show the silver-hilted sword of the brave Norman chieftain Count Ruggiero (Roger), who took Palermo from the Saracens in 1073, and became the independent sovereign of all Sicily. In the old cathedral, which was built during the twelfth century by Archbishop Walter, an Englishman, there are

many, and some of them very fine features, of the Oriental style. In one part the roof is formed by a succession of small domes, precisely like those which are found on the mosques of Cairo and Constantinople. Some of the windows are small, with the low heavy Norman arch; but others spring up lightly and beautifully, and terminate in the form of a sharp arrow-head. The exterior is rich in moulding and tracery; and though, both within and without, this ancient cathedral has suffered much from injudicious modern alterations, it is still a picturesque and most interesting object. The nave is supported by eighty-four magnificent columns of Sicilian granite, which resembles the Oriental granite. There are some sarcophagi in the church, made of the finest red porphyry, which contain the bodies of princes of the Norman and other dynasties. In 1781, one of these, which enclosed the body of Frederic of Aragon, who became king of the island a few years after the fearful massacre of the Sicilian vespers, and the expulsion of the French, was opened, in presence of many persons, when it was observed that, although the body had lain there for 144 years, it was perfect and entire. It was clothed in a triple imperial dress, all richly ornamented with gold, pearls, and embroidery.

Besides the old cathedral, the churches of San Cataldo, San Giovanni Eremito, Martorana, and some others, are of the Saracenic or Norman eras. The Saracenic style, again, shows itself in many of the palaces. That of Ziza, outside of the town, which was once the habitation of Mussulman princes, is in almost perfect preservation, as well as a small adjoining mosque. The building is of hewn stone, with light airy arches, icicle-like pendants, mullions, and tracery. Within the palace there are fountains, courts, and arcades, that remind one of the splendid ruins of Alhambra, in Granada. There is a view from a terrace so exquisitely beautiful as almost to justify the inscription made upon it, which says, "Europe is the glory of the world,—Italy of Europe,—Sicily of Italy,—and the country hereabout of Sicily." The Zizi palace is still inhabited, and was, a few years ago, the residence of Prince Sandoval.

Some of the public buildings of Palermo are imposing from their breadth of front and extent. The great Custom House, in the Piazza Marina, was formerly the office of the Inquisition. That dreadful institution was finally abolished by the enlightened viceroy, the Marquis of Caraccioli, in 1782; but as late as the year 1724 it sent two victims to the flames, a nun and a monk, who were both insane, and who had previously suffered twenty-five years of imprisonment, the rack, and all the tortures employed by that merciless brotherhood. Twenty-six other prisoners of the Inquisition were dragged to the spot to witness the frightful execution.

The Jesuits' College is a vast and magnificent edifice, commodiously divided into many wings and compartments. When Sicily was constitutionalized, in 1812, under the auspices of the British Cabinet, the parliament held its sittings within the walls of this building. Though only in their political infancy, the chambers did some good during their brief existence, which extended only to the year 1815. They abolished the use of torture, and of those infamous dungeons called *Damusi*, which they should have blocked up and wholly destroyed, and so have obliterated one of the disgraces of the city, while they removed the ready temptation offered to some tyrant who might employ them again. The *piombi* and *pozzi* of Venice were scarcely more dreadful than the *Damusi* of Palermo: these were subterranean dungeons, dark and damp, about six feet square, and paved with pointed sharp stones, that cut and wore away the flesh; the prisoners thrown into them were loaded with chains that bore

them to the ground—their flinty bed,—for they were not allowed so much as a little straw to lie upon. Once a day a piece of bread and a cup of water were lowered down to them. If a culprit could endure this torture for forty days without making any confession he was dismissed as innocent; but, in general, a much shorter time was sufficient to undermine the strongest constitution, as the little air confined in those narrow underground cells soon became intolerably bad.

The *Monte di Pietà*, or loan bank for the poor, is another spacious building. It has a very neat portico. These banks, which are administered by government, and where money is advanced on pledges at a low rate of interest, were first established in Sicily during the reign of the emperor Charles V., who was anxious to rescue the distressed from the Jew money-lenders and usurers.

The Observatory of Palermo, though not very remarkable for its architecture, is curiously situated, and highly interesting, as being connected with the discoveries of a great modern astronomer. It is heaped on that huge pile of building which forms the royal palace. It was first erected in 1748, when the attention of astronomers was attracted to the conjunction of five planets in one sign of the zodiac; a phenomenon which, it is supposed, had not occurred, or had not been observed since the creation of the world. The observatory was completed many years after by the celebrated Padre Piazzi, who made from it his discovery of a new planet.

All the antiquities of Palermo are of the middle ages; everything beyond the Saracenic and Norman eras has strangely disappeared. There is not a vestige of the splendid theatres, temples, and stoas of the Panormus (Palermo) of the Romans; these have all been swept away, and every fragment of them, except a few inscriptions and broken statues which are preserved in the senate-house. The celebrated ancient port, which penetrated into the very heart of the city, and bore vessels to the doors of the inhabitants, has been entirely blocked up by successive earthquakes and cannot be traced. These convulsions of nature, which occur frequently in Sicily, have no doubt had a large share in the work of destruction, but they have not done all that work. Fazello, a native historian who wrote about a century and a half ago, indignantly censures and laments the overthrow of some most ancient edifices that took place in his days. These, he says, were not laid low by the injuries of time, nor by the enemy, but cast down by his fellow-citizens and an infamous decree of the senate.

The great boast of modern Palermo (and a beautiful thing it is!) is the promenade of the Marina, outside of the Porta Felice. Here a noble line of palaces facing the bay, a fine carriage road, and a broad pavement, called "Banchetta," for pedestrians, present themselves. At the eastern extremity of the Marina, which is a mile long, there is a botanical garden with a graceful modern building, in which lectures are occasionally delivered, and adjoining to this there is another garden called the "Flora," open to the public at all times, and affording the most delightful walks through avenues of acacias, or orange, lemon, citron, and lime trees. Part of the ground is laid out in parterres of flowers and sweet-smelling plants, which are watered by several fountains. Statues, small temples, and sculptured cenotaphs, all of pure white marble, are scattered here and there with happy effect. This gay and lovely garden is said to occupy the very spot on which the Inquisitors were wont to celebrate their *Auto da Fé*.

The present population of Palermo, with its suburbs, rather exceeds than falls short of 180,000 souls. It is the seat of a considerable trade, which might be increased to an immense extent by an improved system

of government and national education. Nearly the whole of the island is naturally rich and fertile beyond description, and its coasts offer the finest fisheries in the Mediterranean sea. Yet people starve or beg by thousands in the midst of all these advantages; partly through their own ignorance, indolence, and want of enterprise, and partly through the selfish stupidity of successive governments, which during the long period of 700 years (not to mention other sins both of omission and commission) have not made a single road in the interior of the island. Among the exports of Palermo are silks, both raw and manufactured, tanned hides, wine, oil, manna, sumach, barilla, cream of tartar, wax, lemon-juice (in great quantities), fruit, liquorice, tunny, and sword-fish, and occasionally some corn and maccaroni. There is a species of manufacture which we believe is peculiar to this part of Sicily; with the fine silk-like thread obtained from the *pinna marina*, a fish caught along the northern shores of the island, they make beautiful and very lasting gloves and stockings; but we believe that this branch of industry, which was never considerable, has been very much reduced of late years.

BRINDLEY AND THE DUKE OF BRIDGEWATER'S CANAL.

(From the 'Gallery of Portraits,' No. LII.)

ABOUT this time his thoughts were drawn towards a larger sphere of action by the resolution of Francis Duke of Bridgewater to cut a canal from his coal-mines at Worsley to the town of Manchester, distant about seven miles. This scheme is said to have been before conceived by one of that nobleman's predecessors: but that circumstance does not detract from the honour due to the great perseverance and resolution displayed in the execution of his plan. Divesting himself of the splendour which usually belongs to his rank, he devoted his large revenue almost entirely to his favourite undertaking: resisting the temptation to borrow money, lest he should involve himself and his successors in irremediable difficulties, in case of the failure of an undertaking which, from its novelty, no man living could assert to be certain of success. At the same time, having selected Brindley as his engineer, on good experience of his skill and talent, he placed a noble confidence in him; and, without fear or distrust, devoted his energy and fortune to work out the magnificent design which the genius of his coadjutor had planned. As the difficulties to be overcome were very great, so there was little experience to guide the projectors. Navigable rivers indeed had been improved, and those which were not navigable by nature had been made so by pounding up their waters with locks and dams: but of canals, properly so called, this was the first constructed in England. That it might be perfect in its kind, it was resolved to preserve a level, and avoid locks altogether: but to effect this, obstacles were to be overcome such as never had been surmounted in England—obstacles which had always been considered insurmountable. Navigable tunnels were to be cut,—long and large mounds to be carried across valleys,—and in the line which finally was adopted, an aqueduct bridge of three arches, nearly fifty feet in height, and including the embankments on each side, five hundred yards in length, was to be carried over the river Irwell. This part of the scheme being generally considered wild and extravagant, Brindley, to justify himself to his employer, desired that the opinion of another engineer might be taken. This was accordingly done: but the second, on being conducted to the spot where it was intended that the aqueduct should be made, exclaimed, "I have often heard of castles in the air, but never before was shown the place where any of them were to

be erected." But the Duke of Bridgewater's confidence in Brindley was not to be shaken, and the bridge was undertaken and finished within less than a year.

In 1762 the Duke of Bridgewater obtained an Act of Parliament, enabling him to continue his canal from Worsley in an opposite direction to Runcorn, in the tideway of the Mersey, so as to establish a perfect water-way between Liverpool and Manchester, unembarrassed by the constant current, and inequalities of flood and drought, which impeded the navigation of the Irwell. In this part of the line several deep valleys, especially those of the rivers Mersey and Bollin, were to be crossed, and this was done without the assistance of a single lock. Brindley's method of constructing the long embankments, which occurred in some places, was remarkable: he built caissons along the line of its intended course, into which boats laden with excavated soil were conducted by the canal itself, and discharged

their contents upon the very spot where the ground was to be raised. Thus the canal, as it were, pushed itself forward; and the labour and expense of transporting these immense masses of earth was greatly diminished. To guard against the total loss of water, and ruin to the surrounding country, which might occur from a breach of these embankments, Brindley contrived stops, which were gates so hung as to lie horizontally near the bottom when the water was at rest, but to rise and close when any current should be produced by the banks giving way, and thus prevent the escape of any water, except that portion near the breach which should be comprised between them. It is hardly necessary to add that the result of this, the greatest undertaking perhaps ever performed by any private person out of his own fortune, has been the realization of an enormous income to the peer who undertook it, and to his heirs.



[Aqueduct over the Irwell.]

THE BRITISH MUSEUM.—No. II.

ON the institution of the British Museum its objects were divided into three departments—those of printed books, manuscripts, and natural history. The antiquities and artificial curiosities were made appendages of the department of natural history; the coins, medals, and drawings were connected with the MSS.; and the prints and engravings with the library of printed books. The rapid increase of knowledge, as well as the acquisition of numerous objects connected with the subject of antiquities and the Fine Arts, have rendered necessary various subdivisions in the department of natural history, and the creation of a new department—that of antiquities. The great preponderance of the library departments of the Museum still keeps up the term of librarian, which is applied to the different officers who have the charge of departments; which, so far as a name may be thought of any importance, is an inapplicable designation when given to those who are over the departments of botany, entomology, mineralogy, antiquities, &c.

The visiter of the Museum will do well, if he can afford it, to purchase the official catalogue, which is termed, 'A Synopsis of the Contents of the British Museum.' It is an octavo pamphlet of 240 pages, the price of which has been lately, and very properly, reduced from 2s. to 1s. 6d. It is certainly capable of considerable improvement in its details; it might be made both more interesting and cheaper than it is;

might be printed in a more compact and less expensive manner; point out to the attention of the visiter the objects more particularly worthy of attention; and supply information where at present it is deficient. It might thus become a book which the visiter could carry away with him, and read afterwards with instruction and pleasure. The additional sale would amply repay the trouble and expense, and the public would receive more benefit from the Museum. The improvement of the 'Synopsis' forms one of the recent recommendations of the Parliamentary Committee, which will, doubtless, be acted on; and the propriety of selling it in portions or departments is also suggested, which would be another judicious improvement. He whose taste lies towards zoology or entomology might thus purchase for study those departments, without being under the necessity of taking the descriptions of mineralogy or antiquities; and each department could be given more in detail. There are several large and expensive official works, illustrative of portions of the Museum contents; but their prices put them out of the reach of the ordinary visiter. To supply this deficiency in the department of antiquities, the Society for the Diffusion of Useful Knowledge have published two cheap volumes on the 'Egyptian Antiquities,' and two on the 'Elgin Marbles;'—two on the 'Townley Marbles' are in the press. These works have been executed at a very heavy expense for wood-cuts, and they are calculated to interest the scholar as well as the general reader.

Suppose, then, the visiter standing in the entrance-hall of the Museum, with his 'Synopsis' in his hand. The first thing that will strike his attention will probably be the words "Ground Floor," under which is the following paragraph:—

"This floor, consisting of sixteen rooms, contains the old library of printed books. Strangers are not admitted into these apartments, as the mere sight of the outside of books cannot convey either instruction or amusement."

This information is more official than pleasing. If the visiter does not cavil at the objectionable phrase "strangers," he may, perhaps, think that the reason for his exclusion is not cogent. There are many things less worthy of being looked at than an extensive library. The noble room which contains the King's Library is open to the visiter, as he will afterwards ascertain. One of the library rooms on the ground-floor is also open to the public; it contains an original of Magna Charta, which is damaged by fire: alongside of it is a fac-simile engraving. A partial view of the suite of library-rooms may be obtained through the upper part of a door in the Gallery of Antiquities.

There are reasons more valid for the non-admission of the general visiter into these library-rooms than the one given in the 'Synopsis.' The chief reason is, that the passage of a crowd would interrupt not only the students in the Reading Room, but distract the assistant-librarians, whose duty it is to supply the students with every book they require.

The Reading Room of the British Museum has been already described in No. 237 of the 'Penny Magazine.' The rapid increase of persons availing themselves of the privilege of admission has rendered additional accommodation necessary, which it seems is to be provided in the new range of building now finishing in the rear of the other buildings of the Museum. Admission to the Reading Room as a student or reader may be easily obtained; and all who frequent it cannot but acknowledge the facilities for study or research which are afforded, and the promptness with which books wanted are supplied. A few of the Reading Room frequenters are idlers or triflers, who may be seen wasting their time of a forenoon reading novels, or criticising the appearance or habits of their neighbours around them; their number, however, is small, and it surely does not enter into the intention with which the Reading Room was instituted, that it should be increased. As London is the great mart of British publishing enterprise, so the Reading Room of the British Museum may be regarded as a literary factory, where the raw material is worked up, to be afterwards diffused, perhaps, as far as the English language is spoken. It is obvious, therefore, that the influence of such an establishment must be extensive—though unseen, it cannot but be felt. A consideration like this is one amongst several which might be given in reply to such a question as the one put by the late Mr. Cobbett,—“Of what use is the British Museum to the bulk of the people, to whom it is inaccessible?” None but a nation can support such an institution; and the facilities it affords enable that nation to enjoy a better and a cheaper literature than could be produced without it.

The Library of the British Museum, taken as a whole, is composed of different collections, two of which, in particular, are kept distinct from the general mass. These are, the library of George III., which was presented in 1823 by George IV., and the library of Sir Joseph Banks. The library of George III., which is termed the King's Library, is a very valuable one, and was brought together at an expense, it is stated, of little less than 200,000*l.* The original collection of printed books and manuscripts was made up of the Cottonian, Harleian, and Sloanean libraries; to these

was added, in 1757, by George II., a library which had been collecting for the kings of England from an early period down to that time. This contains a great number of illuminated MSS., which came into the hands of Henry VIII. on the suppression of the monasteries. The Museum Library has been yearly augmented by gifts, bequests, and purchases; and at present, in addition to claims under the copyright act, there is nearly 2000*l.* annually expended in the purchase of old and foreign publications. The reader who may wish to have an idea of the nature and value of the contents of the Museum Library, both in printed books and manuscripts, may consult the article "British Museum," in the 'Penny Cyclopædia.'

Let us now return to the landing-place, or entrance-hall, where we left the visiter, with his 'Synopsis' in his hand, acquiring his information about the Library and Reading Room. The entrance-hall, and the staircase leading to the rooms containing the collections of curiosities and objects of natural history, exhibit various things worthy of attention. Here is a statue of Sir Joseph Banks, so great a benefactor to science and the British Museum. "It represents the great naturalist," says the 'Synopsis,' "not as he was in his latter days, feeble and lame, but hale and vigorous; he is seated in an arm-chair, holding a scroll in his right hand. The figure is raised upon a marble pedestal." There is also a statue of the Hon. Anne Seymour Damer, the celebrated sculptress; one of Shakspeare by Roubilliac, bequeathed by Garrick; and a gilt figure of Gaudma, a Burmese idol, presented by Captain Marryat. There are also several preserved animals; a hippopotamus, a llama, a musk ox, a polar bear, an antelope, a Siberian elk, and three giraffes. The latter beautiful animals were, until very lately, only known to us in this country from an engraving or a description—one of the three in the Museum was the first, of which even a stuffed specimen was ever seen in England. The arrival of living individuals in the two Zoological Gardens of London, detracts, of course, from the interest with which preserved specimens are regarded*. Indeed, the rapid improvements now making in zoological science will gradually diminish the value of collections of dead animals. Where we have an opportunity of watching the habits and dispositions of living creatures, however modified by confinement, we shall not, of course, care so much for that which only enables us to consider their forms.

In passing from the staircase into the first room of the upper floor, the visiter will find himself surrounded by what are termed, "a series of artificial curiosities from the less civilized parts of the world." These consist of dresses, weapons, fishing implements, articles of ornament and domestic use, from the Arctic regions, the interior of South America, the South Sea Islands, &c. The second, third, and fourth rooms are devoted to Sir Joseph Banks's, together with Sir Hans Sloane's and other collections of dried plants. The second also holds temporarily Mr. William Smith's collection of English fossils, arranged according to the strata in which they are found. The Sloanean herbaria are contained in 336 volumes, bound in 262, and consist of Sir Hans Sloane's collections made by himself in the West Indies, and of various others presented to, or purchased by, him. The herbarium of Sir Joseph Banks, of which the larger and arranged portion is contained in cabinets, comprises upwards of 24,000 species, the materials in progress of arrangement being estimated to contain 5000 more. The Banksian collection formed at one time the most valuable assemblage of dried plants in Europe, and is still a very important one.

* There is an engraving of the musk ox and of the giraffe in No. 15 of the 'Penny Magazine.' The giraffes at present in the Zoological Society's Gardens are described and figured in No. 270.

Various other additions have been made to the botany of the Museum, partly by donation and partly by purchase. The fifth, sixth, and seventh rooms of the upper floor of the Museum are at present occupied by Sir Joseph Banks's library.

Sir Joseph Banks, who died in 1820, bequeathed to his librarian, Mr. Brown (who is a very eminent botanist), the use and enjoyment of his library and botanical collections during his lifetime; afterwards to go to the British Museum. The trustees of the Museum, anxious to secure the collection as soon as possible, came to an arrangement with Mr. Brown, by which he was appointed to an official situation, having the charge of the Banksian department, as it is termed; and accordingly the books and botanical collection were transferred to the Museum.

The rooms numbered 2 to 7 are not open to the general visiter, which is a matter of regret, as they contain several things which would gratify the most incurious, and which might, at all events, be transferred to the public rooms. The visiter passes directly from the first room into the Saloon, in which commences what is strictly the collection of natural history. The eighth room, which branches off from the Saloon, contains a great variety of artificial curiosities, impressions of ancient seals, glass vessels, earthen vases, busts, statues, &c. There is here also a model of Nelson's flag-ship, the Victory. The 'Synopsis' states, that the general collection of quadrupeds is placed temporarily in the apartments which they now occupy. In the Saloon, the larger species are arranged in upright glazed cases round the room, and the smaller, on account of the want of space, in cases between the windows, and the bats in shallow cases affixed on the others. In the ninth room, which contains mammalia supplementary to those in the Saloon, there is a selection of crustacea and insects, exhibited as an outline of the arrangement of those subjects. The principal collections of crustacea (crabs, lobsters, shrimps, &c.), spiders, and insects, are contained in cabinets in one of the six rooms which, as already stated, are not open to all visitors; and individuals wishing to see them for the purposes of study, must make application to the officer who has them in charge. The greater portion of the insects collected by Sir Hans Sloane are stated to have perished, from the length of time, and the insufficient methods then taken to preserve them. Their place, however, is more than supplied.

The general collections of reptiles in spirits, and starfish, fish and corals, birds generally, and British birds and shells, and a small collection of birds' eggs, are contained in four separate apartments. If the 12th and 13th rooms and Long Gallery were thrown into one, a fine *coup-d'œil* would be produced.

The Long Gallery over the King's Library is appropriated to the minerals, and the collection of secondary fossils—those singular remains which geology has referred to periods antecedent to the present state of things. In considering these latter objects, "we are carried, as it were," says Lord Brougham, "several worlds back, and we reach a period when all was water, and slime, and mud; and the waste, without either man or plants, gave resting-place to enormous beasts like lions, and elephants, and river-horses; while the water was tenanted by lizards the size of a whale, sixty or seventy feet long, and by others with huge eyes having shields of solid bone to protect them, and glaring from a neck ten feet in length; and the air was darkened by flying reptiles covered with scales, opening the jaws of the crocodile, and expanding wings armed at the tips with the claws of the leopard*." The arrangement of

* 'A Discourse of Natural Theology,' p. 47. See also the papers on the Mineral Kingdom in the 'Penny Magazine,' and No. 100, for a comparative view and description.

the collection of secondary fossils in the Long Gallery is only proceeding at present. They are placed in upright glazed cases along a portion of the wall, and consist principally of original portions of fossil reptiles, with plaster casts of others, together with fragments, either original or copied in plaster, of a part of the skeleton of the megatherium, jaws, tusks, and bones of the gigantic elephant, rhinoceros, tapir, &c. Along with these may be mentioned the fossil skeleton found in Guadaloupe, the discovery of which gave rise to many ingenious speculations, which were all upset on the discovery being made that the limestone in which it was found imbedded is of recent formation.

There was no systematic collection of minerals in the Museum for the benefit of mineralogical students, till 1799, when the trustees bought a well-chosen collection of minerals of every class, consisting of 7000 specimens, which had been collected by Charles Hatchet, Esq. Whatever was valuable in the collection of Sir Hans Sloane's minerals (which was not much) was incorporated with this purchase. In 1810 Parliament voted 13,727*l.* to purchase a collection which had been formed by Colonel Greville; and George IV. presented a collection of minerals from the Hartz mountains. These, along with other purchases, as well as bequests and presents, have rendered the Museum collection of minerals a very valuable one. The system adopted for their arrangement, with occasional slight deviations, is that of the celebrated Swedish chemist, Berzelius, as propounded by him in 1824. (See Atomic Theory in 'Penny Cyclopædia.')

The specimens of native iron in the collection are interesting. There is a fragment from a mass in Otumpa, in South America, the weight of which was estimated at about fifteen tons; another fragment detached from the mass of Siberian native iron, which was discovered by Pallas on the summit of a hill between Abakansk and Belskoi Ostrog on the banks of the Jenisey, where it was considered by the Tartars as a sacred relic; the mass originally weighed about 1680 pounds; and a third large mass, which is considered one of the rarities of the collection, from Atacampa in Peru. The specimens of meteoric stones are classed with native iron, because they all contain that metal, generally alloyed with nickel; a number of them are arranged in chronological order, beginning with a fragment of the stone which fell in Alsace in 1492, in the presence of the Emperor Maximilian, then king of the Romans, when about to engage with the French army; the entire mass weighed originally 270 pounds. The list in the 'Synopsis,' which includes fragments of stones which have fallen in England and Ireland, ends with a fragment of one which descended at Juvénas, Ardèche, on June 15th, 1821.

The visiter will not leave the Long Gallery without looking at the sculptured tortoise, wrought in nephritic stone, which was found on the banks of the Jumma, near Allahabad, in Hindostan.

The Long Gallery is hung round with paintings, mostly of illustrious, historical, and scientific personages.

LONDON IN TIMES PAST AND PRESENT.

(From 'The Original,' by the late T. Walker, Esq., one of the Police Magistrates of the Metropolis.)

CONSIDERING the enormous, and in many parts demoralized, population of London, it is quite marvellous there should be so little personal insecurity. I have been in the habit for many years of going about all parts of the town and the environs, at all hours, without any precaution, and I never experienced on any occasion the slightest molestation; and I scarcely ever met in society any one whose own actual experience was different. It was not so formerly, as the following instances will serve to show. At Kensington, within the

memory of man, on Sunday evenings, a bell used to be rung at intervals to muster the people returning to town. As soon as a band was assembled sufficiently numerous to ensure mutual protection, it set off; and so on till all had passed. George the Fourth and the late Duke of York, when very young men, were stopped one night in a hackney coach, and robbed on Hay Hill, Berkeley Square. To cross Hounslow Heath or Finchley Common, now both enclosed, after sunset, was a service of great danger. Those who ventured were always well-armed, and some few had even ball-proof carriages. There is a house still standing, I believe, on Finchley Common, which in those days was the known place of rendezvous for highwaymen. Happily these things are now matters of history.—The standard of wealth is no less changed than the standard of safety. Tavistock Street, Covent Garden, was once the street of fashionable shops—what Bond Street was till lately, and what Bond Street and Regent Street together are now. I remember hearing an old lady say, that in her young days the crowd of handsome equipages in Tavistock Street was considered one of the sights of London. I have had the curiosity to stride it. It is about one hundred and sixty yards long, and, before the footways were widened, would have admitted three carriages abreast. Within memory, the principal carriage-approach to Old Drury Lane Theatre, the last but one before the present, was through that part of Drury Lane which is now a flagged foot-passage, and called Drury Court, just opposite the New Church in the Strand. The ring in Hyde Park, so celebrated in old novels and plays, and so often the scene of duels, is still traceable round a clump of trees near the foot-barracks. It encloses an area of about ninety yards in diameter, and is about forty-five yards wide. Here used to assemble all the fashion of the day, now diffused round the whole park, besides what is taken off by the Regent's Park. At the rate the country is advancing in wealth, what will be the comparison at the end of the next half century, and what will be the burden of the national debt?—I will add one more instance of change. A retired hackney coachman, giving an account of his life to a friend of mine, stated that his principal gains had been derived from cruising at late hours in particular quarters of the town to pick up drunken gentlemen. If they were able to tell their address, he conveyed them straight home; if not, he carried them to certain taverns, where the custom was to secure their property and put them to bed. In the morning he called to take them home, and was generally handsomely rewarded. He said there were other coachmen who pursued the same course, and they all considered it their policy to be strictly honest.

THE CEREOPSIS OF NEW HOLLAND.

THE *cereopsis* is a native of New Holland; and though most voyagers who have visited the distant shores on which it abounds have alluded to it as a species of swan, or as a goose, it is only within the last few years that naturalists at home have gained an accurate knowledge of its true characters and its natural affinities. The first introduction of the *cereopsis* into the records of science was by the venerable ornithologist Dr. Latham, in the year 1802. He published at that time a figure and description of the bird in question in the second supplement to his 'General Synopsis,' regarding it as the type of a new genus among the *waders*, and to this genus he gave the title of *cereopsis*,—the specific designation of the bird, of which indeed he had seen only one example, being *Cereopsis Novæ Hollandiæ*. The term *cereopsis* contains an allusion to the large *cere* covering the base of the bill, but which Dr. Latham, misled by an apparently imperfect specimen, supposed to be extended on the forehead and face; as it is, however, the *cere* is so extensive as to justify the title. Subsequently to the publication above alluded to, Dr. Latham had the opportunity of examining another specimen, from which he took the description published in his 'General History,' vol. ix. p. 432, where he corrects his former views with regard to the extent of the *cere*, but with an assurance, in a foot-note, that, in the specimen first seen, the *cere* extended far beyond the eyes.

Still, strange to say, he retained the *cereopsis* among the wading birds, observing, "Mrs. Lewin informs me, that it is in sufficient plenty in some parts of New Holland, and, from its being so about Cape Barren, has obtained the name of Cape Barren Goose. It certainly at first sight appears not unlike that bird, but in the bill it entirely differs from any of the genus, and the legs are bare a great way above the joint, although it must be owned that the feet, having a considerable membrane between the toes, would otherwise bring it to class with the web-footed." Mrs. Lewin adds, "that it becomes very tame and familiar, so as to be domesticated with our common goose, and that the flesh is well flavoured." On the continent, where, until Temminck figured it in his *Planches coloriées* as appertaining to the swimming birds, it did not appear to be known, it was regarded, on the authority of Latham, as a wader. After Temminck, it was also figured by Vieillot as a swimming bird; but the figure, although sufficiently characteristic, is in one point erroneous, inasmuch as it gives the *cere* extending over the top of the head. In 1831 Mr. Bennett described and figured the *cereopsis* in the 'Gardens and Menagerie, &c., delineated;' his figure, which is very accurate and characteristic, being taken from a specimen in the Gardens of the Zoological Society, the Society having, at that time, eight living individuals. These, as he observed, then exceeded "in number all the stuffed specimens that exist in public collections in Europe, the latter, so far as we are aware, being limited to one in the British, one in the Paris, and one in the Berlin Museums." Two specimens of adults, and one or two of young individuals, are in the Museum of the Zoological Society.

Though Vieillot figured the *cereopsis*, he appears not to have suspected its identity with a bird previously described by him in the 'Nouveau Dictionnaire d'Histoire Naturelle' as the *Cygne andré*, from the characters detailed by M. Labillardière, (see his account of the voyage of D'Entrecasteaux in 1792,) "who mentions the occurrence, in Espérance Bay, on the south coast of New Holland, of a new species of swan, rather smaller than the wild swan, of an ashy grey colour, somewhat lighter beneath, with a blackish bill, covered at the base by a tumid brimstone-coloured *cere*, and legs slightly tinged with red." By way, however, of confusing the species still farther, M. Vieillot described a specimen brought home by M. Labillardière from Van Diemen's Land, and deposited in the Paris Museum as a species of goose, under the title of *Anser griseus*. D'Entrecasteaux informs us that Riche, one of the naturalists attached to his expedition, had described the bird under the title of *Anas Terræ Leeuwin*.

The habits of the *cereopsis*, in a state of nature, have been succinctly detailed by various voyagers. Most probably it is migratory, at least to a certain extent; for Captain Flinders found it more abundant on Goose Island in some seasons than in others. It frequents grassy districts and the shore, but rarely takes to the water, its food being exclusively grass. Both at Lucky Bay and Goose Island these birds were very abundant, and so tame that the crew of Captain Flinders had no difficulty in knocking them down with sticks, or even in taking them alive. M. Bailly reports to the same effect respecting those seen by him at Preservation Island; and Labillardière says, that at first they were so little alarmed by the presence of man, as to suffer themselves to be taken by the hand; but in a short time they became aware of their danger, and took to flight on the approach of any one. All agree as to the delicacy of its flesh. From the ease with which the *cereopsis* becomes domesticated, we are not without hope of seeing this bird added to the list of those which enliven our farm-yards, and contribute to the

luxuries of our table. It breeds freely in our climate, feeds like the goose, but is even more familiar; and requires only that ordinary attention which is always paid to domesticated ducks, geese, and poultry. Its voice is deep, hoarse, and clanging; short, but inflected.

Though rightly separated as a distinct genus from that of the common goose, the *cereopsis* belongs to the great family of *Anatidæ*, or swimming birds: in the comparative length, however, of the legs, which are naked for a short space above the knee; and in the imperfection of the webs between the toes, it departs in some degree from the more typical of the family. It exhibits, in fact, the characters which are peculiar to the goose, and which separate them from the duck, carried out to a still farther extent. The goose is organized less expressly for water than the duck, or some others of the *Anatidæ*, and the *cereopsis* still less; consequently the beak is shorter, the legs longer, and the feet less webbed. Its food is entirely vegetable; a short stout bill is requisite for plucking it up from the ground. In size this beautiful species equals the common goose; but its bill, as we have said, is shorter, being very thick at the base, and somewhat arched above. The top of the head is pale grey: the rest of the plumage is slate grey, each feather on the back and shoulders being margined with a paler tint, while the greater coverts and the secondary quill-

feathers have a round dusky spot near the extremity; the quills and tail-feathers dusky black; tip of the bill black; cere yellow; tarsi orange-yellow; toes and webs black.

Several specimens are now living in the Zoological Gardens, and from these our figures are copied; they represent a pair of adult birds, surrounded by a small troop of their young. The markings of the young, while yet covered with down, are very singular. The ground colour is white, but a stripe of greyish-brown passes along the top of the head and back of the neck; and a dash of the same colour extends from the base of the bill over the cheeks, encircles the eye, and nearly joins the stripe down the neck; which, having attained to the back, spreads and divides into three broad ribands, one of which passes down the centre of the back, while one passes along each side, and occupies the undeveloped wings. The chest and under surface are clouded with brown. When in charge of their young the adults are very pugnacious, driving other birds to a distance with great spirit; and even at other times this jealousy of their companions in captivity is but little abated, as we have remarked in the specimens at the Gardens. The black swan from New Holland displays a similar spirit, and will not endure the approach of its snow-white relative; indeed, we know of instances in which white swans have not only been seriously injured, but even killed by their dusky rivals.



[*Cereopsis* and Young, from the Zoological Gardens.]

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THE MARKET-CROSS OF CHICHESTER.



[Chichester Market-Cross.]

CHICHESTER, like Chester, preserves its walls; and like that city, too, it exhibits, in the manner in which it lies, and the direction of its principal streets, undoubted evidence of having been a Roman settlement or encampment. Chichester stands on elevated ground, between six and seven miles from the sea-coast, in the

VOL. V.

western division of Sussex. It does not contain anything very remarkable, beyond the cathedral, with its finely-proportioned steeple; its old Town-Hall, of which a view was published in No. 239 of the 'Penny Magazine;' the old palace of the bishops of Chichester; and the Market Cross, of which a view is given above. The

3 B

walls, which are about a mile and a half in circuit, will, as long as they are preserved, be interesting to the antiquarian, and to all who wish to see actual evidence of what walled cities were in times passed away, and also to remark the mode in which Roman encampments were laid out. Chichester is believed to have been the Roman Regnum, or capital of the Régni; and it is supposed that the Emperor Vespasian resided here about the year A.D. 50, and that Claudius erected a temple within the city. After the Romans left Britain it was occupied by the Saxons, from one of whom, a famous leader or chieftain, named Cissa, it was (at least so it is conjectured) called *Cissan Ceaster*, the city or castle of Cissa, and subsequently Chichester.

Chichester is included in the list of towns of the Staple, in the statute of 27th Edward III., called Ordinario Stapularum, the Ordinance of the Staple. It has returned two members to Parliament from an early period. By the Reform Act, the boundary of the parliamentary borough was considerably enlarged. A brief sketch of its municipal history is given in No. 240 of the 'Penny Magazine.' Under the Municipal Corporations' Reform Act the city is divided into two wards, with six aldermen and eighteen councillors. The population in 1831 was 8270. There is no manufactory at present in the city or its neighbourhood, but an extensive corn and cattle trade is carried on.

The Market-Cross is pronounced by Mr. Britton to be "the most enriched and beautiful example of this class of buildings in England." It was erected by Bishop Story, of whom the Rev. Alexander Hay, the historian of Chichester, gives the following account:—

"Edward Story, Doctor of Divinity, Fellow of Pembroke Hall, in Cambridge, was consecrated Bishop of Carlisle, October 14, 1468; and when he had sat nine or ten years there, was translated hither in 1478. He built the cross in the market-place, which, for beauty and magnificence, equalled, if not surpassed, any in the kingdom; and that the city might not be at any charge with it, he left (we are told) an estate at Amberley, worth full 25*l.* per annum, to keep it in repair, which, a few years afterwards, the mayor and corporation sold in order to purchase another of the same value nearer home. He founded also the Grammar School in this city A.D. 1497, and died in January, 1502, in the 80th year of his age."

The Market-Cross stands in the centre of the city, at the intersection of the two principal streets, which run east and west and north and south. "Like those of Malmesbury, Glastonbury, Cheddar, &c.," says Mr. Britton, "it was intended to shelter persons who brought articles to the market. A large central column, from which spring numerous bold ribs, beneath a vaulted roof, and eight pier buttresses, support the superincumbent panelled wall, parapet, pinnacles, and flying buttresses. Shields, charged with the arms of the bishop already named [Story], impaling those of the reigning monarch, are attached to the buttresses; whilst the walls between the arches and the outer ogee mouldings are ornamented with sculptured mitres. These mouldings terminate with large and elaborate finials, which serve as brackets to pedestals in niches, which are surmounted by fine canopies. Three inscriptions on tablets fill as many niches, whilst large clock-dials are inserted above them. The clock was presented by 'Dame Elizabeth Farrington, as an hourly memento of her good-will,' in 1724. The open turret is comparatively modern, and executed in a very bad style*."

* 'Britton's Picturesque Antiquities of English Cities,' Lond. 1830. In a note Mr. Britton says, "John Newman, Esq., architect of London, had elaborate drawings of this cross made in the year 1829; for the purpose of making an appropriate design to finish its apex; it would reflect credit on the citizens of Chichester to carry such a design into effect."

THE TZAR IVAN,—A FRAGMENT OF RUSSIAN HISTORY.

OWING to the slower advancement in civilization of that vast, and for the most part heterogeneous and thinly-peopled empire, as well as to the want of a properly settled and observed order of succession to the throne, and to other causes, Russia in modern times has been the scene of a whole series of state tragedies, and has brought down to our own days the kinds of events and catastrophes which were common enough in the rest of Europe and in England during the middle ages, but which we have long been accustomed to reflect upon as things characterizing and belonging to remote periods of history. The adventures we are about to relate bear, in some respects, a resemblance to those of a mysterious state-prisoner in France; but, unlike the "Man of the Iron Mask," the identity of the Russian prince was fully established, and he ended a long captivity by a violent death.

Ivan was lineally descended, on the female side, from the Tzar Ivan Alexievitch, who was put aside, in the order of succession, on the plea of imbecility, to make way for his younger brother, who ascended the throne and became the celebrated Peter the Great. He was the son of Anne, grand-daughter of Peter's elder brother, by Antony Ulric, Prince of Brunswick: he was born in August, 1740; created Grand Duke by his aunt, Anne, the reigning Empress; and at her death, in the October following, succeeded to her throne by right of descent. In a country like Russia an emperor in swaddling-clothes was not likely to have a long reign;—Ivan's lasted just sixteen months, he being deposed by Elizabeth in 1741, when he was arrested by soldiers in his cradle, and carried, with his father and mother, to the fortress of Riga. After a close confinement of eighteen months the unhappy party were withdrawn, but it was only to be conveyed to another state-prison at Dunamund, more secret, secure, and barbarous than the first. From Dunamund they were privately removed to the castle of Oranienburg, a small town in the province of Vorentz; and here the child was cruelly separated from its parents, shut up in a distant part of the fortress, and, after some time, reported to be dead. His parents, having pined for two years at Oranienburg, were removed to Kolomogori, where Anne, his mother, expired in March, 1746. Not long after this event, a Russian monk discovered that the young Tzar was alive, and in the castle of Oranienburg; and setting to work with great industry and art, the monk contrived to release him from prison, and convey him many hundred miles across the country, intending, in a proper place, to set up his banner, proclaim Ivan emperor, and effect another revolution. The fugitives, however, were surprised and taken at Smolensko. What became of the monk is not stated,—it is most probable he was *knouted* to death. A mystery also hangs over the movements of the young Tzar, but it should appear that, after being rapidly and most secretly removed from one prison to another, he was at last consigned to a secret cell in a convent on an island in the lake of Valdai, not very far from the high road between Petersburg and Moscow. How long he remained in that convent, and in what manner he was treated there, none of his biographers have attempted to explain, one of them observing, correctly enough, that it is not surprising there should be much obscurity in the history of a state-prisoner immured from his very infancy. In 1756 he was secretly conveyed, by Count Peter Shuvalof, grand master of the artillery, to the house of his cousin, Ivan Shuvalof, in Petersburg, where the Empress Elizabeth, who had seized his throne, saw him by night, and spoke with him without making herself known. He was then sixteen years of age, tall, and well-grown, but wholly uneducated; and

from long solitary confinement deplorably helpless, and half an idiot. The empress is said to have shed tears at this interview, but *reasons of state* did not permit her to alleviate his misfortunes. The prince was carried off to the strong fortress of Schlüsselberg, built upon a small island of the Neva, at the point where that river issues from the Ladoga Lake, and there immured with the greatest precaution, none of the garrison knowing for a long time who or what he was. Under an arbitrary government, where secret arrests are frequent, and state-prisoners common, the circumstance was not likely to attract much attention.

Within the strong and lofty walls of Schlüsselberg there is a long range of corridors, enclosing a large area, or open square, and containing dungeons for state-prisoners. The windows of the dungeons occupied were closed up with brick, leaving towards the top a small aperture, a few inches square, that admitted a sort of twilight gloom. At the very end of one of these corridors was the room allotted to the wretched Tzar—a vaulted cell about twenty-four feet square, with walls of bare stone, and floor of brick, and with no other furniture than a truckle-bed, a table, and two or three chairs. Ivan's window, however, was not blocked up with brick—it was *mercifully* glazed with glass, covered with a plaster, which, while it admitted the rays of light, did not permit him to see through the panes and observe what was passing in the corridor or square, nor allow of any one's seeing into his cell. In this dismal apartment he was confined for eight years.

From the life he had led no one will be surprised at the character drawn of him here, or at the state of his intellectual development when he had attained the full age of manhood. His ideas were few, and of the simplest kind,—his knowledge most limited; and though not absolutely an idiot, he betrayed frequent symptoms of imbecility, and sometimes of downright insanity. He could neither read nor write; he spoke a little Russian imperfectly, and knew a few words of German, which he must have learned in his childhood from his father and mother; his speech was always thick and inarticulate, and when agitated he stammered exceedingly. In his limited range of knowledge he knew precisely the thing which it would have been best for him to have remained utterly ignorant of:—he knew that he had once been an emperor! On being questioned, at a later period, how he had obtained this information, he replied, "I was told so by one of my guards, who, looking at me, burst into tears: on my asking why, he told me that he and the whole nation had taken the oath of allegiance to me;—and the man then told me about my dethronement, and the accession of Elizabeth." From some similar source he had learnt something about the Grand Duke Peter, and his wife Catharine (afterwards the Great), who eventually succeeded Elizabeth.

For some time he was allowed the use of plate, with fine table-linen (like the Man of the Iron Mask), and a great variety of rich dishes, and all kinds of wine in abundance. He then frequently drank to excess, and, when intoxicated, became choleric and ferocious, raging like a maniac. In consequence of this, his allowance of wine was diminished. Like nearly all persons in his condition, he was particularly fond of finery and dress. It is said he would change his clothes twenty times a day, and walk about his narrow cell admiring himself. He retained some indistinct notions of religion, and at times would pray very fervently; but here, again, he showed insanity, frequently boasting that he was in the habit of receiving revelations from the angel Gabriel.

In March 1762, when death, that tyrant more powerful but less cruel than emperors and empresses, had disposed of Ivan's gaoler Elizabeth, Peter III.

who had succeeded her, and who, a few months later, was to be hurled from his throne by his own wife Catharine, and to be murdered by her satellites, conceived the whim of visiting the imperial captive in his dungeon. On approaching the island of Schlüsselberg, the Tzar Peter narrowly escaped being drowned, which would have been a mild and pleasant death, compared to that he soon met with. He was accompanied by Volkof, one of the Narishkins, and General Baron Korf, who had been governor of the castle of Oranienburg, during part of the time that Ivan had been confined there with his parents. The emperor and his attendants, without making themselves known to the captive, entered his dungeon. They found Ivan remarkably neat in his person and linen; his clothes were, however, of the coarsest quality. He looked and spoke like an idiot; affirming one moment that he was the Emperor Ivan, and the next that Ivan was dead and gone, but that the soul of that emperor had taken possession of his body. On being asked whether he recollected his father and mother, he answered that he did; and then he burst forth into bitter lamentations that the Empress Elizabeth (of whose death he seemed ignorant) had kept them as well as himself in a wretched state; adding, that he well remembered that he and they had once been under the care of a kind officer—the only person that had ever shown them any tenderness. Baron Korf instantly asked whether he should still know that officer. He answered no,—it was so long since—when he was a child—"but his name," he added, "I have not forgotten—it was Korf." Korf was much affected. Ivan, as we have mentioned, had heard something about Peter and his wife Catharine, and as he repeatedly said he hoped to be Emperor again (a hope with which he was at all times strongly pre-possessed) he was asked how he would behave to them. "I would have them killed—executed—both—both!" returned the prince savagely. Here it was Peter's turn to be affected, but in a manner different from that of Korf: he became giddy and sick at heart—was near fainting, and rushed out of the cell. After breathing the fresh air for awhile, he returned and renewed the conversation with Ivan, with whom he remained about an hour.

Soon after this extraordinary interview, Peter ordered the state prisoner to be removed, by water, to Kexholm, a fortress built on an isle at the point where the river Voxen flows into the Ladoga Lake. Ivan was conveyed in an open boat across part of the lake, towards a galliot which lay at anchor to receive him: the wind was high, and the water much agitated; this, at first, made him tremble with fear, but he soon became composed. The storm increased, and the skiff was upset, but the boatmen, though not without great difficulty, saved the prince, and put him on board the galliot. In the month of August following, when the great Catharine, having disposed of her husband Peter, reigned over all the Russias, Ivan was removed from Kexholm, to be again shut up in his dungeon at Schlüsselberg. This time his journey seems to have been made by land, for it is recorded that the carriage in which he travelled broke down near to the village of Schlüsselberg, on the mainland, upon which, for fear that he should be seen, his conductors covered him all over with a cloak, and led him by some private passages through the imperial palace there, down to the water side, where he was put into a boat, and soon consigned to his old quarters, from which he was destined never more to issue.

In spite of every jealous precaution, vague rumours got afloat that Ivan, the rightful heir to the throne, was alive in Schlüsselberg Castle. A secret, necessarily confided to so many, could not be kept, and all the facts of the case became known to one who despe-

rately determined to take advantage of them. This was Vassili Mirovitch, an under-lieutenant of the regiment of Smolensko, then in garrison at the village and fortress of Schlusselfurg. Mirovitch was grandson of the rebel of the same name, who followed Mazeppa, Hetman of the Cossacks, when he revolted from Peter the Great, and joined Charles XII. in his mad expedition into the Ukraine. He had petitioned the Empress Catharine to restore to him the confiscated estates of his grandfather, and meeting with a refusal to this and other applications, he vowed revenge, and looked to a revolution as the only means of advancing his fortunes. As soon as he ascertained who the secret state-prisoner at Schlusselfurg really was, he resolved to set him at liberty and proclaim him lawful emperor. This impetuous ruined man had no money, no friends among the great; his accomplices were even less considerable than himself. He first communicated his bold project to Ushakof, an under-lieutenant in the Velidi-Luki regiment, who, being easily gained, went with Mirovitch to a church, on the altar-stone of which the two confederates swore secrecy and fidelity. They then drew up a manifesto, which they purposed publishing as soon as Ivan should be released. A short time after these transactions, Ushakof was accidentally drowned, and Mirovitch was left without a single confederate or confidant. Despairing of being able to do everything single-handed, he sounded one Tikon Casatkin, a menial of Catharine's court, whose discontented mind he prepared for a revolution, without explaining whence it was to proceed, or by whom it was to be conducted. With Simeon Tchevaridsef, a lieutenant of artillery, he was more frank and explicit, telling him at last that the Emperor Ivan was living, and would of a certainty be released and placed under the protection of the artillery corps stationed at St. Petersburg. But he did not tell Tchevaridsef who was to open the state-prison, and he never had any other confidants except within the walls of the fortress. The headquarters of the regiment of Smolensko, to which Mirovitch belonged, were in the village of Schlusselfurg, and every week a hundred men from it relieved the guard in the fortress. At last his turn came to go upon that duty, but during a whole week that he was in the fortress, he could find no favourable opportunity for his purposes. He, however, discovered, and set a private mark on, the door of Ivan's cell; and when his seven days were expired, he so contrived as to be continued on duty in the fortress in lieu of another officer. The first person he gained over to his project was one Piskof, a common soldier; and with this single confederate, on the 4th of July, 1764, at 10 o'clock at night, he revealed his plans to three corporals and two soldiers, whose eyes he dazzled with the prospect of wealth and promotion which were sure to fall to the liberators of the Tzar. Appalled, however, at the danger of the enterprise, these men long wavered; nor was it till two o'clock in the morning that they were induced to enter into the plot. Mirovitch then summoned about forty of the soldiers that were for the greater part roused out of their sleep, and telling them he had received some secret orders from the empress, ordered them to load their muskets and follow him. The men, without reflection or hesitation, obeyed orders, and rushed after him towards Ivan's dungeon. On his way Mirovitch was met by Berednikof, the governor of the fortress, who had hurried from his bed on hearing an unusual noise. "What means this disturbance?" cried Berednikof. Mirovitch replied by striking him on the head with the butt-end of a musket, and then seizing him by the arm, delivered him a prisoner to one of the corporals who was privy to the plot. They then advanced to a strong gate which guarded the corridor leading to Ivan's cell. Here Mirovitch demanded ad-

mittance in the name of the empress, but the call was not obeyed by the sentinels within. "Fire, and force your way," cried he to his followers. The men discharged their muskets, and the sentinels returned the fire. On this the assailants, who had expected no opposition, came to a pause, and insisted on seeing the order of the empress, which they thought they had been obeying. Mirovitch instantly produced and read to them a paper, at the bottom of which he had counterfeited the imperial signature, and the purport of which was, that he, Mirovitch, was to remove Ivan from the custody of Vlasief and Tchekin, two officers specially appointed to take care of the royal prisoner, and who were at that moment within the corridor, and close to Ivan's chamber. Where hardly anybody could read, deception was not difficult:—nothing doubting of the authenticity of the document he had produced, the soldiers prepared to renew the attack, and some of them dragged up a cannon from one of the bastions, which Mirovitch himself pointed against the corridor. The match was in his hand, when the strong gate was suddenly opened from within, and he and his party were admitted into the corridor without any show of resistance. Mirovitch rushed along the passage to the marked door of the prince's cell—that door too was opened at his approach—and a little beyond its threshold stood the two officers, Vlasief and Tchekin, who, pointing to a dead body on the floor, covered with blood, said, "Here is your emperor!" Mirovitch gazed for a moment with silent horror, and then, recovering himself, returned with astonishing composure to the spot where he had left the governor of the fortress in custody. "I am now *your* prisoner," said he, as he delivered up his sword, "adverse fortune has blasted my design—I mourn not for my own fate, but for the misery of my poor fellow-soldiers, the innocent victims of my undertaking." He then embraced the under officers, and surrendered with his men.

A very few words may explain the foul catastrophe that threw the conspirator's plan in the dust, at the very moment when he was flattering himself he had fully and easily succeeded in it. As soon as Vlasief and Tchekin saw the cannon aimed against the gate, and that there was no hope of preventing Mirovitch's men from gaining possession of the person of their wretched charge, they ran to his cell with the determination of murdering him. Ivan, who had been awakened by the noise, was pacing up and down his cell; he had no weapon, and he was almost naked, but he defended himself with the vigour of despair, and was not dispatched without great difficulty. Even after he had been pierced through the hand with which he had parried the murderer's thrusts, he broke one of their swords. He was stabbed in many places, but a wound in the back finished him. It is not probable that these officers of Catharine would have proceeded to such a horrid extremity on their own responsibility, and, indeed, it seems to be admitted on all sides that Vlasief and Tchekin had express standing orders from the empress to destroy Ivan in the case of any attempt to release him being, or appearing to be, likely to succeed. On the day after his murder, the body of the prince, in a shirt and a pair of drawers, was exposed in the fortress of Schlusselfurg, into which vast crowds were admitted to see that he was really dead. The concourse at last became so great, and the sympathy of the people so apparent, that apprehensions were entertained of a tumult. The disfigured corpse was therefore wrapped in a sheep-skin, put into a coffin, and privately buried in an old chapel of the fortress. At the time of his death the Tzar Ivan was twenty-four years of age, twenty-three of which he had spent in prison. Mirovitch met his inevitable doom with infinite coolness and courage. He was beheaded at St. Petersburg on the

25th of September, and his body, and the scaffold he suffered upon, were burnt on the spot. The Russian court, and the flatterers of that court, called it mercy, but, in reality, the punishment inflicted on fifty-five individuals, (the poor ignorant soldiers and others,) who were treated as accomplices, was worse than death, and

in some instances too horrible to describe. In praising the clemency of the great Catharine, who seldom inflicted capital punishment, Voltaire, D'Alembert, and others, seem to have been ignorant of the pains and penalties she substituted for death.

UPSALA.



[City of Upsala.]

UPSALA or Upsal, formerly the capital of all Sweden, at present of the province of Upsala, is an exceedingly pretty but small town, rendered remarkable by its ancient university and cathedral. It is situated near to the great lake Mälär, which facilitates its commercial intercourse with Stockholm, the present capital of the kingdom, but which lies low, and so much out of sight as not to enter into any of the views from Upsala or its environs. Several steam-boats already navigate this lake. The little river Fyrisa runs through Upsala and falls into the Mälär. Within the town the banks of this river are planted with trees, and as, generally speaking, the houses are built apart from each other, and have gardens and groves about them, the effect, in the fine season of the year, is remarkably pleasing. The present fixed population does not exceed 5000 souls, to which number, however, must be added the students frequenting the university, who generally amount to about 800. This seat of learning gives a quiet academic aspect to the whole city, of which no inconsiderable part is occupied by the different buildings devoted to letters and science. Among these edifices the new library, a detached building, is the most considerable. Its architecture is simple and elegant, its situation excellent, for it stands on a gentle eminence that faces one of the principal streets, and is seen from most parts of the city. The foundation-stone was laid by his present Majesty soon after his accession. The interior was not quite finished last year. The books,

manuscripts, and other treasures of the old library of the university, were to be deposited here as soon as the place was in a state to receive them.

The old buildings of the university are remarkable rather for their number and the variety of useful purposes to which they are devoted than for any external display of architecture. There are separate houses for the different professors and lecturers, who are numerous, and who have generally been distinguished, as a body, by their acquirements and the conscientious discharge of their duties as teachers. Their salaries are small, and the fees, which are paid only on the admission of students, very inconsiderable; but to make up a proper remuneration for men of learning, such of them as are in holy orders have also prebends in the cathedral churches. Anciently the different nations, as they are called, which compose the Swedish monarchy, namely, the Ostrogoths, Westrogoths, Swedes, Finns, and Vandals, had all different academic dresses, which were discontinued on account of the animosities to which they gave rise. The interesting nomenclature which revives the recollection of mighty invasions and revolutions, when the Roman empire fell under the sword of the free men of the north, is still, however, retained, and each nation has its separate heads and endowments in the university.

The foundation of the University of Upsala dates from the year 1476, when Sten Sture, the elder, obtained the requisite bull from Pope Sixtus IV., and took the ancient

University of Bologna for his model. In the course of the following year the government and senators of Sweden granted to the institution the same privileges as were enjoyed by the University of Paris. In 1624, after the reformation of religion, the great Gustavus Adolphus, who was a benefactor to the institution, reorganized it in a few essential respects, and assigned it some estates which were put under the direction of the professors themselves in consistory. By an old law, which we believe is still observed, no one can undertake the important offices of a civil magistrate in Sweden without having undergone a public examination at one of the three Universities of Upsal, Obo, or Lund. The old library of the University of Upsala, which was founded by Gustavus Adolphus, contains 80,000 volumes, and many rare manuscripts and other curious objects. A building erected by Gustavus III. at the end of last century, and which contains a vast green-house, and a museum, is a noble edifice with a Doric portico, remarkable for its proportion and beauty. This edifice is situated in the middle of the botanical garden, which is like that of Trinity College, but much larger. It serves as an agreeable promenade to the inhabitants of the town. A little beyond it, on the other side of the river Fyrisa, there is a detached hall in which Linnæus lectured and taught the principles of his system. From the time of Linnæus, who passed many years of his life at Upsala, and lies buried in the neighbouring cathedral, the Swedes have been distinguished by their love of botany. The botanical cabinet of the university, which was for some time under the direction of Thunberg, the distinguished traveller and naturalist, who deposited in it all the plants he had collected in southern Africa, Japan, and other countries, is exceedingly rich and interesting, and with the garden and conservatory attached, and the able professors employed, it renders Upsala a good school for this pleasing and valuable branch of science. The zoological cabinet, also enriched by the donations of Thunberg, and the mineralogical cabinet, stocked with specimens from all parts, and complete in what regards the minerals of Sweden, a country abounding more than most others in mines, are both of them very valuable collections.

Among the public ornaments of Upsala is a large granite obelisk, erected to the honour of Gustavus Adolphus, in the name of the Swedish people, by Charles John, the reigning sovereign, who was formerly Marshal Bernadotte, and at one time a common soldier in the republican army of France. A remarkable character under all circumstances, Gustavus seems to have well merited the throne to which fortune raised him, and to have endeared himself to a brave and honest people. His obelisk stands in an open space between the university and the cathedral, and is much admired on account of the elegance of its form and the hero it commemorates.

The cathedral, which is the finest ecclesiastical edifice in the kingdom of Sweden, stands opposite the old library of the university. It is in a good Gothic style, and reminded Bishop Heber of Westminster Abbey, to which, he says, it is not unlike. That excellent traveller, however, complains of some injudicious repairs and additions made in modern times, of the removal of all the carved work or tracery from the windows, and of a coating of white plaster, with which the good people of Upsala had disfigured the interior. A church was erected on the spot at the first conversion of the Swedes to Christianity, but the present edifice is a work of the fourteenth and fifteenth century. It is about 260 English feet in length, by 110 in breadth. It contains the tombs of many of the most interesting characters in Swedish history. In a chapel behind the high altar is the tomb of the great Gustavus Vasa, the liberator of his country, whose ashes repose there with

those of his wife, while several of his children and grandchildren occupy another tomb close at hand. This chapel has been recently painted in fresco by a distinguished Swedish artist who has studied at Rome, and formed his style on the great masters of the Italian school. The appropriate subjects he has treated are derived from the history of the hero who lies beneath, and his adventures among the hardy mountaineers of Dalecarlia, who, from the condition of a helpless fugitive, hiding and working in the mines, raised him to be king of all Sweden in 1523. In another chapel of the cathedral are the sepulchres of the families of Oxenstein and Stenbock. Among the tombs, which are too numerous to describe, there are several adorned with sculpture, the work of native artists—and here we may mention that the Swedes, whose performances are but little heard of in England, have for many years cultivated sculpture with great success. The works of Sergel, who was sent to study at Rome and Florence by the unfortunate Gustavus III., at the end of the last century, have been compared, in some instances, to those of Flaxman and Canova.

Linnæus, the pride of the place, lies interred under a stone near the main door of the cathedral, with his much-loved wife by his side. The stone bears no inscription—not even his name; but at a short distance from it there is a bust of Linnæus, cut in *alto-relievo* on black marble, and the following inscription engraved on a tablet of beautiful Swedish porphyry:—

“BOTANICORUM PRINCIPE,
AMICI ET DISCIPULI.
M.DCC.XCVIII.”

The countenance is very expressive, and this bust is said by his surviving friends to be the best likeness extant of the great naturalist. In a sort of cave adjoining the cathedral they preserve (a rude wooden figure of the Scandinavian god Thor, which was one of the idols of the Pagan temple of Old Upsala. At a short distance from the cathedral there is an old church, remarkable for having been the scene of the tragical death of St. Eric, the first Christian king of Sweden, who was murdered there by his subjects for attempting to overthrow their idols, and change the fierce religious faith they professed. Several other objects in or near to Upsala recall the memory of the times of the Runic mythology, and of the customs of a warlike and predatory people. The ruins of the Pagan temple where Thor frowned, with his “mighty hammer” (the very image now preserved in the cathedral), still exist at Gamla-Upsala, or Old Upsala, and contain the broken image of another god. Near at hand are some rude barrows, or heaps of stones, which, according to tradition, cover the remains of ancient kings and warriors who once held dominion on sea as on land, and carried their victorious arms to the distant corners of the ocean, whence they returned with rich booty to carouse in ale and mead, and enjoy a foretaste of the delights of Walhalla*, that paradise in which they would drink out of the skulls of the enemies they had killed in battle. On certain holidays the now peaceful and civilized people of Upsala meet at this spot, and commemorate in potations of excellent ale the festivities of their Pagan ancestors. On the borders of the Mälars Lake, some Runic stones and fragments of buildings are believed to mark the site of Sigtuna, the capital of the dominions of the god Odin, who founded the city himself. At another spot, about a mile from Upsala, there is a small house, which has been built over the large stones upon which the kings of the country used to be crowned in the open air, in much the same manner, we suppose, as the old kings of Scotland, whose stone coronation

* Walhalla, Hall of Heroes,—the King of Bavaria has given this name to one of his erections, which is figured and described in No. 274 of the ‘Penny Magazine.’

seat, or throne, so scrupulously preserved in the Abbey of Scone, whence it was borne to England by the conquering Edward I., occupies so conspicuous a place in our old chroniclers and historians.

The terrace of the castle of Upsala affords a fine view of the city and of the neighbouring country, which, for beauty and neatness, is said to resemble some of the finest parts of England. This old and very extensive fortress stands on an eminence near to the Library, and is interesting on account of historical associations, and the memorable events of which it was the scene during the age of Gustavus Vasa. It contains a curious bronze monument, erected in honour of Gustavus Erickson.

LITERARY FORGERIES.

THERE is an article in D'Israeli's 'Curiosities of Literature' under the title given above. The subject is an interesting one, and might be considerably extended beyond the limits of an article; the author, indeed, confesses that a large volume might be written on literary impostors. The truth is, literary forgery is nearly as old as writing itself—nor is it peculiar to a country. Wherever value has been attached to written documents, there, at intervals, cupidity, or a depraved passion for notoriety, has incited individuals to forge historical records, or to imitate the supposed productions of an age, or of some illustrious author. Where such things have been done to amuse a social circle, and without any intention of perpetuating a fraud, they may be passed over as jokes, and in fact, have been frequently engaged in by persons eminent both for intellectual character and probity. But when brought before the public in a solemn manner, and backed by a series of falsehoods, they are to be highly reprobated; the delusion lasts but a short time; and too frequently the forgers find to their cost that "honesty is the best policy." It would probably be difficult, now-a-days, to support a literary forgery, under competent examination, for an hour; but during the eighteenth century the practice was a common one, and frequently imposed on literary individuals for a considerable period.

Two of the most remarkable of modern literary forgeries were committed by boys—clever boys indeed—but they both felt the smart of their departure from truth and honesty. One of these was poor Chatterton. Nothing very distinct has been, or will be elicited respecting the manner in which he effected his forgeries. His father was sexton of St. Mary Redcliff, Bristol*, and it was by means of his father's connexion with that church that he appears to have conceived the idea of bringing forward his own productions as ancient literary relics. A coffer in a room in the church contained some old title-deeds; it was broken open, and the title-deeds, which were wanted, were carried away: but a number of old manuscripts, which were also in the chest, were considered to be of no value, and Chatterton's father brought a quantity home as waste paper. This set Chatterton's wits to work; he got up some poetical pieces, which he pretended to have found amongst the MSS. of the old chest; and being led further into his own snare by the inquiries of many people whose curiosity was excited, he kept up the delusion by a continued manufacture. The Chatterton controversy was at one time a subject of general interest, but it has now been nearly forgotten. Persons of rank in the literary world engaged in it, many of them defending the authenticity of the poems of Rowley, the name under which Chatterton published his fabrications. These poems consist of pieces of all the principal classes of poetical composition,—tragedies, lyrics, pastorals, epistles, ballads, &c. As the pro-

* See 'Penny Magazine,' No. 169, and BRISTOL in 'Penny Cyclopædia.'

ductions of a youth of sixteen, they evince unquestionable genius. Chatterton went up to London as a literary adventurer, where, after starving for some time, he put an end to his existence on the 24th of August, 1770, before he had reached the age of eighteen—exemplifying in his life and death a remark made by Southey, in his recent 'Life of Cowper,' that little reliance can be placed on a kind heart, a quick sensibility, and even devotional feeling, where they are not controlled, directed, and strengthened by principle.

The other literary forgery was that of the Shakspeare MSS., committed by Mr. W. H. Ireland, when he was a youth about seventeen. This created what is usually termed "a great sensation." The most celebrated literary characters of the day were cheated into approbation; and when the truth was afterwards discovered, offended pride naturally revenged itself by pursuing the author with invective, and depreciating his abilities. One of the fabricated Shaksperian plays ('Vortigern and Rowena,') was performed at Drury Lane, on the 2nd of April, 1796, to a crowded audience, flocking to see a newly-resuscitated play of Shakspeare's. As Mr. Ireland has fully detailed the particulars of his imposture, and has expressed his sorrow for the fraud, it will be better to give his own account of the affair. His father, who was a Shaksperian enthusiast, was incessant in the expressions of anxiety to possess an autograph of the immortal bard's; and, says Mr. Ireland, "being in a conveyancer's office, and environed by old deeds, the silly idea struck me of investigating numerous bundles of law documents, in the hope that I might find some instrument signed by Shakspeare; which labour, of course, proving abortive, I had recourse to a dealer in old parchments, whose shop I frequented for weeks, under the same fallacious impression; when, finding all to no purpose, then it was, (as a German amalgamator of the horrific would assert,) that the demon seized his opportunity to place temptation in my way. In fine, wearied by the fruitless toil, in an evil moment, the idea first seized me of the possibility of producing a spurious imitation of Shakspeare's autograph; when, without reflection, having supplied myself with a tracing of the poet's signature, I wrote a mortgage deed, imitating the law hand of James I., and affixed thereto the sign-manual of Shakspeare. The instrument in question was shown, accredited in all directions, and my father rendered happy; when, without a thought of anything further, I conceived myself amply recompensed in having been the instrument of producing so much felicity.

"For some days this mortgage deed, purporting to be between Shakspeare and one Michael Fraser and Elizabeth his wife, was inspected by crowds of antiquaries and Shaksperian enthusiasts; when, on a sudden, the question was started, concerning where the deed had been found. I was of course appealed to, and never having once dreamed of such a question, it was on that occasion the first serious difficulty presented itself to my imagination. *Fallacia alia aliam trudit.* The tale resorted to was as simple as possible, namely: That I had formed an acquaintance with a gentleman of ancient family, possessed of a mass of deeds and papers relating to his ancestors, who, finding me very partial to the examination of old documents, had permitted me to inspect them; that shortly after commencing my search, the mortgage deed in question had fallen into my hands, which had been presented to me by the proprietor. I added, that the personage alluded to, well aware the name of Shakspeare must create a considerable sensation, and being a very retiring and diffident man, had bound me by a solemn engagement, never to divulge his name. Such was the manner in which I accounted for becoming possessed of the deed, sincerely trusting that the matter would thenceforward remain buried in eternal oblivion.

Your German writer of the marvellous would exclaim, 'No, no! it was then too late; you had fallen into the demon's snare—was spell bound—within the vortex of his machinations, and incapable of extricating yourself from the impending fate that awaited you:' be this as it may, I was not permitted to continue passive. The late Honourable Mr. Byng, afterwards Lord Torrington, Sir Frederick Eden, Bart., and a long string of persons, whose names it would be superfluous to annex, gave it as their decided opinions, that where-soever I had found the deed, there, no doubt, the mass of papers existed, which had been so long and vainly sought after by the numerous commentators upon Shakspeare. These assertions, incessantly dinned into my father's ears, were retailed to me with increased vehemence. I was sometimes supplicated, at others commanded, to resume my search among my supposed friend's papers; and not unfrequently taunted, as being an absolute idiot, for suffering such a brilliant opportunity to escape me. Thus circumstanced, I knew not how to act, and cursed the first precipitate measure I had adopted; while at every meal when I presented myself, the same alarum was rung in my ears, so that no alternative remained but to attempt something further, or be regarded in the light of a downright fool, not only by my father, but by the numerous personages who had inspected and placed confidence in the mortgage deed. My evil genius predominated: I penned a few letters, and 'The Profession of Faith,' all of which passed muster; although, in many instances the documents produced as 200 years old, had not been fabricated many hours previous to their production."

Thus stimulated, Ireland produced his 'Vortigern and Rowena,' and 'Henry the Second,' as genuine plays of Shakspeare. The very circumstance of Drs. Parr and Joseph Warton, being entrapped by the Shakspeare MSS., and of George Chalmers, an author of considerable repute, and holding an official situation under government, engaging, along with other literary men, warmly in a controversy, in which he took the side of the authenticity of the documents, is proof sufficient that they manifested very considerable ability, especially when the age of the author is considered. He, however, lived to feel and confess that ability is best employed when consecrated to the service of truth.

CORN-HUSKING IN AMERICA.

[From a Correspondent.]

THERE are certain rural operations amongst our Transatlantic brethren which are performed in quite a different way to the plans commonly pursued among ourselves, for there the people prefer working together in little communities to labouring alone on their own rural domains. In some local sections of our own island it is not yet uncommon to see all the neighbours assemble with their horses and ploughs, on some particular day, in order to expedite the necessary spring-work of some on-coming tenant; and in the mountainous districts, where large flocks of sheep are kept, it is customary for as many persons to assemble where the "sheep-shearing" is held, as are not only capable of shearing the whole flock during the day, but also find sufficient time when the "shearing" is over for feasting and drinking—and for engaging in feats of leaping, wrestling, and other rural amusements common to that part of the country where the "shearing" takes place. Our brethren, however, on the other side the Atlantic, are not satisfied with annual or semi-annual meetings, but contrive on every possible occasion to perform their labour upon a principle of co-operation. Such meetings are designated in the northern and eastern sections of America "bees," signifying thereby, I presume, that in such assemblings they imitate those industrious

insects. They therefore have their "slashing bees," their "chopping bees," their "logging bees," their "stump-extracting bees," their "corn-husking bees," &c. &c. It is of this last-named "bee" that I propose to speak more particularly.

Indian corn or maize is harvested rather late in the season, in those portions of the North American continent previously referred to; for after it has been cut it requires at least three or four weeks to cure effectually the thick and juicy corn-stalks. After it has been set up in large bundles for about that period, it is then taken on carts or waggons into the immediate vicinity of the barn, and the "corn fodder" (after the "husking" has taken place) is stowed away upon the hay-mows, or upon cross poles near the roof of the barn; while the "corn ears" are deposited in the corn-crib—a small building resting on wooden posts at the corners, in order to secure it from vermin, the sides being formed of narrow strips of thin boards with interstices between to afford a free circulation of air, without which the corn would become mouldy and unfit for domestic purposes. Previous to this, however, the bundles having been placed outside the barn, but as near as practicable, the "husking bee" takes place. As it was intended for "a sort of frolic," they are mostly young persons, of both sexes, that have been invited; and an hour or two after dark the business of "husking" commences. The "huskers" squat promiscuously among the bundles, and dexterously stripping off the leaves or "husks" which envelope the corn-ears, sever them from the stalks and deposit them in baskets placed for that purpose; while the un-eared stalks are cast to the common pile of "corn-fodder." The business of "husking" is not carried on in total darkness, for to every little group of five or six "huskers" a lantern, lending a "dim and dubious light," is commonly allotted. If the "cider season" has commenced (which commonly is the case), new cider is freely distributed, and the "whiskey-jug" is passed joyously around, "from mouth to mouth," for it is the custom to drink from the neck of the bottle. About midnight they are regaled with hot coffee, with sundry cakes and sweetmeats; while fun and frolic, merriment and glee, reign uncontrolled, until some one announces that it is time to re-commence "husking." During the whole night "songs are sung and tales are told," and it is at "husking bees" that "matrimonial engagements" are frequently made up. Whisky and cider continue to circulate as the night advances; and by the time that day begins to dawn, the "huskers" will adjourn to the interior of the barn, and join in a country dance, to the popular and national air of 'YANKEE DOODLE.' The whiskey-jug is then once more passed round, and the whole party, somewhat drowsy and weary, depart for their respective places of abode, with the understanding that they are to assemble, a night or two hence, to have another "husking-frolic" at the house of some other farmer.

Thus do the young people go from farm to farm in this sort of "husking" community, until they have "husked" for all those that belong to their little clique,—or at least for all such as have no objection to patronize "husking frolicks." Such are the "husking bees" of our Transatlantic brethren! Productive of much good they cannot be; for one-half of the hands employed by day would perform the same work in a much better manner, and at less expense, taking the feasting and drinking into the account, without any risk of endangering the health or morals, by an exposure to the night dews and the veil of darkness—for they husk under the broad canopy of heaven.

* * * The Office of the Society for the Diffusion of Useful Knowledge is at 59, Lincoln's Inn Fields.

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THE ISLE OF WIGHT.—No. II.



[Ventnor Cove.]

IN our last Monthly Supplement we conducted our readers round the exterior and coasts of this island. We will now endeavour to describe some of the inland scenes, and point out a few of those beautiful short excursions we then alluded to. The general characteristics of the scenery by land are gracefulness and fertility, the central range of downs though at some points bold, not attaining to sublimity. It offers that blending pasture and pastoral life, with arable land, farming, and gardening, which is always so agreeable to the eye and imagination. In former times the isle was uncommonly rich in forest scenery, and although some of the woods have wholly disappeared to supply timber to the dock-yards of Portsmouth, and others have been much thinned, the country is still well sprinkled with trees. The almost invariable recurrence of fine woodland scenery, in connexion with glimpses of the sea, is a peculiar feature of the Isle of Wight. Water is not wanting. Besides the rivers Yar and Medina, which flow right across the island from south to north, and admit vessels with their snow-white sails far inland, among trees and hills, there are numerous streams and springs of less note scattered over the country. Indeed almost every valley has its flowing stream, the waters of which, from the natural percolation they undergo

through limestone strata, are in general singularly pure and transparent. Villages and mills on the banks of these clear streams, with rustic bridges across their beds, and cattle lowing on their brink, continually serve to make out those pleasant, cool, rural pictures which please even in words. From the small size of the island, and the comparative short course of the longest of these rivers and rivulets to the sea, they never overflow or spoil their banks. When many parts of England are oppressed with floods and inundations, the people of the Wight are wholly exempt from those evils, having all the benefit and beauty of flowing waters without being liable to their devastation. With the exception of those streams which trickle through the chines, at the south-side of the island, all the waters of the Wight have a northerly course, and fall into the Solent sea that separates the island from the Hampshire coast. The course of the main chain of hills, as we have already stated, is from east to west; it has in all its extent the character of downs, and presents in some parts far-spreading carpets of turf, and odorous thyme, and wild flowers that cannot be trod without delight to more senses than one.

Leaving Cowes, which we made our point of departure for the coast voyage, the tourist may walk or

ride by a pleasant inland road to Newport, the capital, which is situated almost in the very centre of the island; or he may go to that town by water, ascending the river Medina, which is called Mede in ancient deeds, probably from the Latin *medium* (middle), the river dividing the island in the midst. (This particular stream we may mention, *en passant*, abounds near its mouth with flat-fish and excellent oysters.) From Cowes to Newport, by land, is about four miles and a half, and as the river does not wind much, the ascent by water is very little more. The tide flows up almost to Newport bridge, and carries large barges to the quay of the town, which is built at a point in front of Newport, where another stream forms its junction with the Medina. Here the fertile, pleasant valley of the river, chequered with gardens and groves, the neat, thriving town, the vessels loading or unloading, and the fertile hills that encircle the whole, afford a scene which is at once tranquil and animated. Newport, the capital, is the most ancient existing town of the island, and is still the place that has the greatest trade and the largest fixed population; for Cowes and Ryde are more the resorts of pleasure, and lose more than half of their occupants at the departure of summer. The agriculturist ships his corn and other produce on the Medina, which bears it down to the sea-port at Cowes, and the returning barges bring articles of manufacture, coals, iron, timber, tea, coffee, and whatever else may be wanted, back to Newport, which is a central depot, and furnishes nearly all the interior and back of the island. Sir Richard Worsley tells us that in his time, on every Saturday (the principal market-day), no fewer than 200 waggon loads of different kinds of grain were brought into Newport, amounting to 1400 or 1500 quarters; great part of which was made on the island into flour or malt, or biscuit for the navy, and the rest exported. The present population of Newport is about 4500 souls. The town is situated on a very easy ascent of ground, and chiefly disposed in three parallel streets in length, and as many in breadth. At the points where these streets intersect, there are three squares which serve as market-places, but which have been much encroached upon by recent builders. The dwelling-houses, generally built of brick, are neat and convenient, without any pretension to grandeur or elegance. The town, on the whole, notwithstanding its antiquity, has a modern air, but there are a few old buildings in it. The Free Grammar School was erected in 1619 in the reign of James I., and here, in 1648, James's son, the first Charles, then a prisoner at Carisbrook Castle, entered upon the remarkable treaty with the commissioners from Parliament, which goes by the name of the treaty of Newport. The school-room, in which the conferences that lasted forty days were held, is about fifty feet long, and internally has undergone slight alteration since the time when its walls echoed the voices of the unfortunate Charles and his advisers, of Hollis, Vane, Glyn, and the rest of those commissioners who eventually left the island with a firm determination to bring the king's head to the scaffold.

In the church, an old but frequently repaired edifice, built originally in the year 1172, towards the end of the reign of Henry II., and dedicated to St. Thomas à Becket, (whose murder and canonization were then recent events,) was discovered, in 1793, the coffin of Charles's second daughter, the Lady Elizabeth Stuart, who died a prisoner in Carisbrook Castle, about a year and seven months after her father's execution at Whitehall. According to the royalist party of the time, she was poisoned, but there is no more truth in this report (usual with all such personages and at such times) than there is in the odd story that the republicans once intended to bind her highness apprentice to a button-maker. Elizabeth was only fifteen years of age, nearly three of which she had passed in confinement. The

body was inclosed in a leaden coffin, which had this legible inscription:—ELIZABETH 2^D DAUGHTER OF YE LATE KING CHARLES DECED. SEPT 8TH MDCL. The spot was originally marked by a small stone, bearing the initials E. S., but soon after the discovery of the vault a small brass plate with a brief inscription was placed over it, inlaid in the floor of the church just within the screen. In another part of the church is a curious sculptured monument to Sir Edward Horsey, a Captain of the Wight in the time of Queen Elizabeth. Sir Edward was a brave and fortunate commander, by sea and by land. He was much beloved by the favourite, the Earl of Leicester, who entrusted him with the secret of his clandestine marriage with Lady Douglas Sheffield, whom the knight gave away in person. This circumstance, however, did not prevent his denying or concealing all knowledge of the nuptials when the worthless earl fancied another fair one. In reward for services like these the favourite gave him the captaincy of the island; and though foully obtained, Sir Edward discharged his trust very much to the satisfaction of the islanders. It is recorded of him that he stocked the country with game, and gave a young lamb for every live hare brought into it that was fit for breeding.

The Market-house and Town Hall of Newport form, together, a building of some importance, and though the architecture is somewhat open to criticism, the edifice is neat, if not elegant. It was begun in the year 1814, finished in 1816, and cost 10,000*l.* Within the Hall is still held a *Curia Militum*, or Knight's court (a curious relic of the olden time) in which the governor's deputy or steward presides; the court having jurisdiction in all civil matters where less than the value of 40*s.* is involved, in every part of the island, with the exception of the borough of Newport. The founder of this feudal court is supposed to have been the first Norman Lord of Wight, and the judges, who decide without a jury, are all such as hold a knight's fee from the lord. A still greater ornament to Newport is the 'Isle of Wight Institution,' an elegant edifice, erected by subscription in 1811, and now well furnished with books and periodical publications. The town has also a 'Mechanics' Institution,' and other societies for the promotion of literature and education. The House of Industry, in the vicinity of Newport, is an establishment deserving of a visit. It is a spacious building, founded soon after the year 1770, for the accommodation and education of the poor of the island. Eighty acres of productive land are attached to it, and divided into fields and gardens, which are cultivated by its inmates. The defects and vices in the constitution of nearly all our old workhouses seem to have been avoided in this. Instead of a debasing idleness industry has been encouraged, and the simple manufactures carried on within-doors have almost sufficed for the maintenance of the establishment, which has generally given shelter to from 500 to 600 individuals, and can afford proper accommodation for 1000. The aged and infirm have been supported in comfort—the young well instructed, and made fit for some useful trade or occupation in the world. It is strange that so good an institution should not sooner have found imitators in other parts of the kingdom. The House of Industry, with its wise and humane laws and regulations, has no doubt contributed to keep the island free of vagrants and beggars, which it has long been to a remarkable degree. On the edge of King's Forest, or Parkhurst, not far from the House of Industry, are the Albany barracks, with an excellent military hospital and grounds attached to them. The barracks were begun at the end of the year 1798, and were almost constantly occupied during the last war.

The fair of Newport, which collects people from all parts of the island, is celebrated for its display of female beauty, which, as we mentioned in the first part of these sketches, is a very general quality in the Isle of Wight.

In the olden time, however, not only was this claim disallowed, but other imputations were maliciously cast upon the Wight by its neighbours. The classification is curious. The worthy Sir John Oglander, who began to write a history of his native place in 1615, says indignantly—"It is, and hath been, a tax laid on this island, that it never produces any extraordinary fair handsome woman, nor a man of any super-eminent gifts in wit or wisdom, or—a horse excellent for goodness. Now I can answer that no part of England, in general, the quantity considered, hath produced more exquisite in either species than this island."

From the town of Newport, where the tourist will find several comfortable inns, there are daily coaches which go to and return from Cowes and Ryde at stated hours. These short journeys afford a great variety of pleasing scenery, and may be recommended to those who have little time for seeing the island. No one, however, should turn back from Newport without seeing Carisbrook, which is only a mile and a half from the town, and the most memorable place in the whole island. A beautiful public promenade, called the Mall, leads nearly all the way from the town to the village.

The approach to Carisbrook, with its old romantic castle (one of the most ancient in these kingdoms) towering high above it, is exceedingly picturesque, and highly interesting from historical associations. The village and the church, with its steeple, Gothic arches, and embattled towers, are prettily situated on the slope of an ascending hollow or dell which is backed by the Downs, and richly studded with trees, from the verdure of which the light blue smoke of the cottagers' fires is seen rising with that effect which, though constantly described both by pen and pencil, is never observed in reality without emotion. Though now a mere village, Carisbrook was the capital of all the island under the independent lords of Wight; but when Isabella de Fortibus, the last of those petty sovereigns, sold the regalities (in 1291) to the English crown, Newport began to rise in importance, and soon became the metropolis, for which its central situation on a navigable river, and other advantages, best suited it. The present church of Carisbrook, which contains some uncouth sculpture, and a curious epitaph in memory of Captain Keeling, a naval hero of the time of Elizabeth and the first James, is supposed to stand upon the ground of a Saxon church built some centuries before the Norman conquest, and called "the church of the manor of the Fair Valley." Evidences of the rude arts of the Saxons were discovered many years ago near some of the fine springs of excellent water that exist in and near to the village. The church of Carisbrook is remarkable for having eight choice bells, which, according to one of the local historians, "are perhaps as musical bells as were ever cast." Adjoining to the church, which stands on a gentle eminence, are the ruins of a priory of Cistercian monks, founded soon after the Norman conquest by Fitz-Osborne Earl of Hereford, of whom we have spoken in our preceding Supplement. The paltry remains of this once extensive and stately edifice are now converted into sheds and stables dependent on a farm-house hard by. There is scarcely enough of the priory left to make a picturesque ruin. Not so of the castle which stands opposite to it, but on a much higher eminence; where towers, keep, and barbican, ramparts and battlements, frown along the steep, and are just sufficiently ruined and ivy-clad to be eminently romantic and picturesque. The keep, and the artificial mound it stands on, which lies to the north, and is much higher than the ground-plan of the rest of the fortress, are generally supposed to have been raised by the Saxons as early as the sixth century.

In the eleventh century Fitz-Osborne, the Norman, included this portion in his larger castle, which covered the space of an acre and a half, and was of a square

form, with rounded angles; the base of the whole being surrounded by a fosse or ditch. In this Norman castle the lords of that race lived in all the splendour and with all the tyranny of those times. All lands were held of it, and on condition of serving it and defending it at all times from the enemy. Hence it was called the "Honour of Carisbrooke."

Fitz-Osborne's castle was repaired and enlarged during the reign of Richard II., by Montacute, Earl of Salisbury; and it was again enlarged, and in part wholly rebuilt by Lord Widville in the time of Edward IV., when the noble main gateway, and the great round towers which flank it, were erected. Extensive additions were subsequently made; the last by Queen Elizabeth, when the outer walls, which still remain, were made to enclose no less than twenty acres of land. These works were erected according to the modern rules of fortification, under the direction of Genebella, an Italian, who is said (we can scarcely see why) to have imitated the famed citadel of Antwerp. On an attentive examination the tourist will detect several specimens of the Norman age, and a very small portion of what seems Saxon architecture, on the western side of the castle next the entrance. Among the curiosities pointed out by the guides to the stranger's notice are two wells—the one in the centre of the keep, said to have been 300 feet deep, but now partially filled up; the other in the castle-yard, 200 feet deep, where water is drawn up by means of a wheel, turned by an ass. The sober quadruped works precisely in the same fashion as did the dogs called "turnspits" in our kitchens in former times. The wheel is broad and hollow, and furnished inside with steps, or projecting pieces of wood; the ass is introduced into the interior of the wheel, and by treading from one of these steps to another turns it round, and makes the wheel act like a windlass. Penuant, Gilpin, Hassel, and our other tourists of the last century, speak of a poor donkey that performed this duty uninterruptedly for the surprising long space of forty years, and was then turned out to enjoy his old age in the paddock. This second well is also famed for having the property of echoing the fall of a pin in a most singular manner.

The most modern part of the castle is the chapel of St. Nicholas, which was entirely rebuilt by George II.

Carisbrook Castle was in one instance made memorable by the heroism of a female, whose adventures in some respects resembled those of the celebrated royalist the Countess of Derby, and Queen of the Isle of Man. At an early stage of the civil war, Jerome, Earl of Portland, who had been governor for Charles I. during many years, was removed by Parliament as a Catholic, or as one who, at least, was a favourer of popery. Shortly after, when he was suddenly imprisoned in London on this ground, and further accused by the Commons of a thoughtless and profligate expenditure of public money in ammunition, entertainments, and the drinking of loyal toasts in Carisbrook, the principal inhabitants of the island drew up a petition in favour of their "noble and much-honoured and beloved captain and governor," in which, dropping all allusion to his wasting of the ammunition, &c., they stuck to the more important question of his religious faith, declaring that not only he was a good Protestant, but that there was not one professed Papist, or favourer of Papacy, in the whole Isle of Wight. This petition being disregarded by Parliament, they drew up a spirited remonstrance, in which they spoke of defending themselves by arms, and admitting no new governor that was not appointed by the king. Twenty-four knights and squires signed this paper, but the people were very differently inclined; and they were led by Moses Read, the mayor of Newport, who declared in favour of Parliament, and transmitted a representation on the great danger accruing to the state from the Countess of



[Map of the Isle of Wight.]

Portland being allowed to continue in the castle, and retain Colonel Brett there as her warden. Read soon received orders to seize the fortress, and secure Colonel Brett, the countess, her five children, and other relatives who had taken shelter within the walls; and he marched upon Carisbrook with the militia of Newport, and 400 sailors drawn from the vessels at anchor in the island. The garrison of the old castle did not exceed twenty men, but the countess resolved not to surrender it except on honourable conditions. At the approach of the force from Newport, with a lighted match in her hand she walked deliberately to one of the bastions, declaring she would fire the first cannon at the foe. Moses Read, who had expected no resistance, soon came to terms with the bold countess, and the castle was surrendered on conditions. The countess was soon afterwards removed from the island. No other attempt was made at resistance, and though somewhat agitated by Charles's residence in Carisbrook a few years later, the Wight remained enviably tranquil during the whole of the civil war. This fortunate circumstance invited many families from the neighbouring counties, which were exposed to the horrors of warfare, to go and settle there; in consequence of which the rents of farms rose in proportion of from 20*l.* to 100*l.*, and did not find their ordinary level until the Restoration*.

We have described in an early part of our Magazine the confinement of Charles I. at Carisbrook, and the life he led there, with his unsuccessful attempts to escape from the castle. Part of the chamber he occupied, and the grated window through which he tried to force his body, are shown at the left hand side of the first court. A curious story is told of this king's conduct immediately before his flight to the Isle of Wight, where he expected to be received as a free and sovereign prince, but was detained as a prisoner. He was at Hampton Court, and wholly in the power of his enemies: he determined to escape, but knew not whither to go. In this dilemma he sent Mrs. Whorwood to

* Sir R. Worsley's History.

consult Lilly, the celebrated astrologer and conjurer, as to which would be the safest place for him to fly to. The star-gazer did not recommend the Isle of Wight, but some retired spot in Essex. The king, however, fled by night, while Mrs. Whorwood was looking out for this safe retreat, and, as if driven by destiny, repaired to Carisbrook, which was the very place the Parliament would have wished him to be at, for Hammond, the governor of the castle, was devoted to their cause.

It was subsequently to the execution of Charles (for he had not the pleasure of their society there), that his two youngest children, the Duke of Gloucester and the Princess Elizabeth, of whom we have spoken in describing Newport Church, became inmates of Carisbrook Castle. They at first lived with the Countess of Leicester at Penshurst, in Kent, where Parliament allowed 3000*l.* a-year for their maintenance. When they were removed to this castle, the young Duke was attended by his tutor, one Mr. Lovel, "an honest man," as Clarendon calls him, and both he and his sister were humanely treated. One of their greatest hardships, next to their loss of liberty, appears to have been the Parliament's order, "That no person should be permitted to kiss their hands, and that they should not be otherwise treated than as the children of a gentleman." Mildmay, who was then captain of the castle, observed this order very exactly, so that the Duke was never called by any other style than Master Harry. Two years after the death of his sister Elizabeth, the young Duke was liberated by the advice and influence of Cromwell, who caused 500*l.* to be paid by the Treasury to defray the expenses of removing him to the continent—the only condition imposed being that he should sail directly from the Isle of Wight, and not touch at any part of the English coast.

After the removal of the Duke of Gloucester, the Commonwealth continued to use Carisbrook Castle as a state-prison. One of the most remarkable of the inmates of Carisbrook, at a somewhat later period of the Commonwealth, was Sir William Davenant, the

poet, and *god-son* (at least) of Shakspeare. Davenant had adhered to the court, and fought repeatedly in the field against the Parliamentary forces. On the downfall of his party he fled beyond seas, where he was put to strange shifts, and derived all the help he could from a pretty apparent want of conscience. According to old Aubrey, when at Paris, "He laid an ingenious design to carry a considerable number of artificers, chiefly weavers, from thence to Virginia, and by Mary, the Queen-Mother's means, he got favour from the King of France to go into the prisons and pick and choose; so when the poor wretches understood what his design was, they cried *uno ore* (with one voice) '*Tous Tisserans*'—We are all weavers! Well, he took thirty-six, as I remember, and not more, and shipped them; and as he was on his voyage to Virginia, he and his weavers were all taken by the ships then belonging to the Parliament of England. The French slaves I suppose they sold, but Sir William was brought prisoner to England: whether he was first a prisoner at Carisbrook Castle in the Isle of Wight, or at the Tower of London, I have forgotten. He was a prisoner at both. His '*Gondibert**,' 4to., was finished at Carisbrook Castle. He expected no mercy from the Parliament, and had no hope of escaping with his life. He was saved, however, by the intervention, according to one account, of two aldermen in his favour, according to another, by the wit of Henry Martin."

The fine old hunting forest, called Parkhurst, or Alvington, or the King's Forest, which extended over nearly 4000 acres of land, coming close up to Newport and Carisbrook, must have greatly added to the variety and beauty of the scenery. It was so closely wooded, that according to tradition a squirrel could have leaped through it from end to end, and from side to side, without ever being obliged to touch the ground. It was first emparked during the reign of William the Conqueror, and was afterwards much frequented by our Norman princes, who sallying from the castle with their fierce but picturesque retinues, made the greenwood ring with hound and horn. Like the New Forest, Windsor, and the rest of the royal chases, it had its warden, its ranger, and under-rangers. It is now so thoroughly cleared and cut down, that scarcely anything remains but brushwood. It formerly bordered on another forest called Northwood, which covered the left bank of the Medina, and stretched almost to the spot where the town of West Cowes now stands. The old names are still retained, though nothing can well be less like forests than the two places. The walks through Parkhurst are, however, extremely pleasant. There is one delicious spot called Park Cross, which combines some of the finest features of a gentle rural landscape. There are smiling valleys sprinkled with cottages, pools, and running waters in abundance; and high, above all, there is a noble range of downs. The downs here, as in most other parts of the island, exhibit a vast number of those circular marks on the grass which philosophers have not yet satisfactorily accounted for, and which peasants call Fairy-rings,

Where,
At fall of eve, the Fairy people throng
In various game and revelry to pass
The summer night, as village stories tell.

Having briefly described the immediate neighbourhood of Carisbrook and Newport, we may now point out a few longer excursions, each of which will give good employment for a whole day or more. For convenience of arrangement we will make Newport our centre and general point of departure and return.

Proceeding by Carisbrook the tourist will find himself, after a short ride or walk, at Gatcombe, a handsome modern house, formerly the seat of one of the Worsleys, which lies in a snug, sheltered bottom, and with an

* A long poem with some fine passages, but tedious as a whole.

adjacent church, beautiful groves, a little lake, and a purling stream, makes up an agreeable picture. About three miles farther on, to the south-east, is the village of Godshill, similarly situated, and equally pleasing. The church, which was one of the six in the island given by Fitz-Osborne to the Abbey of Lyra, in Normandy, stands on an eminence, insulated by a rich wooded dell, and shows its tower-steeple afar off. It contains the tombs of the Worsleys (whose seat we are now approaching), from the fifteenth to the nineteenth century, as well as the monuments of some of the Leighs of Derbyshire and the Wight, whose daughters, by intermarrying with them, made the Worsleys the lords of these fair domains.

A wild, but not uncommon, tradition is told to account for the elevated situation of Godshill church. The foundation was laid at the foot of the steep hill, and the men began to build there, but the next morning, on returning to their labours, they found that all the stones and other materials had been removed during the night and placed at the top of the hill. They recommenced their work below, but the next day all was gone, and this continued until they took the hint, and built upon the spot indicated to them by invisible hands, and by so doing added much to the beauty of the scene. Its elevated situation, however, has more than once exposed the church to danger. In 1778 it was struck by lightning, which so injured the old building that a part of it fell in the following year.

In the quiet little village beneath the church there is a grammar school, which was founded and endowed above 200 years ago by one of the Worsleys. The name of this family occurs so often, and, in general, is connected with such agreeable and praiseworthy objects, that it is almost painful to reflect it should now be extinct in the island.

Appuldercombe, which has long been the seat of the ancient and honourable family of Worsley, is beautifully situated about a mile to the south of Godshill. The park, adorned with fine beech trees and venerable oaks, rises in noble slopes behind the house, and terminates in some lofty downs which command extensive prospects. On the most elevated point there is an obelisk of Cornish granite, seventy feet high, erected in 1774 to the memory of Sir Robert Worsley, the founder of the present house, by his grandson Sir Richard, the last Baronet. About a mile distant, on the summit of a rocky hill, are the ruins of a castle, called Cooke's Castle. The mansion itself, which stands on the site of a very old manor-house, of which we have seen a drawing, is comparatively modern, having been begun in 1710 by Sir Robert Worsley, who left it in a very incomplete state, and finished by his grandson many years after. Here was written the history of the island, to which we have frequently referred. That book, which bears the name of Sir Richard, was in fact the production of three successive generations of the Worsleys. It was begun by Sir Robert, who died in 1747, continued by his son, Sir Thomas, and finished and published by his grandson, Sir Richard, in 1781. We confess that, for ourselves, it is not without a pleasing interest we see the love of their native place, and the desire of illustrating it thus descend from father to son. But the house of Appuldercombe contains material and beautiful objects of art and antiquity to interest the tourist. There is a large collection of paintings, drawings, statues, and bassi-relievi. Some of the pictures, particularly the historical portraits, were in the old manor-house for many generations, and were presented to the Worsleys by the princes and great personages they represent. The sculptures and drawings were collected by Sir Richard, the last Baronet, who in the course of the years 1785-86 and 87, made an extensive tour through Italy, Greece, Egypt, and Turkey, and took with him able artists, who made the drawings and

views of the most interesting places under his own inspection. Permission to see these treasures is readily obtained by applying to Mr. Thomas Sewell, at Newport. Sir Richard printed a *catalogue raisonné* of his collections, and afterwards a larger work called "Museum Worsleianum," which contains numerous engravings with descriptions. This gentleman died here, at his birth-place, about thirty years ago. He left no children, but was succeeded by his sister, whose daughter, by her marriage, carried the mansion and estates of Appuldercombe to Lord Yarborough, the present proprietor.

On leaving Appuldercombe the tourist soon reaches the Undercliff and the village at Ventnor Cove, which we described in the preceding Supplement. A little to the south-west of Ventnor Cove is Steep Hill, and about a mile and a half farther on the romantic village of St. Lawrence, with its old miniature church, which is considered to be the smallest building of the kind in these kingdoms. It is only twenty feet long and twelve wide, and is probably of Saxon origin. At this point, and still more from the heights behind St. Lawrence, all the beauties of the Undercliff are seen to great advantage. Continuing the route to the west, with the sea constantly in view, and passing through Mirables, we soon reach Sand Rock, where, among other pleasant things, there is an hotel which looks more like a gentleman's villa than a place of public entertainment, and affords some magnificent seaward views. A romantic path which leads through rocks and fallen cliffs—the huge *debris* of landslips, terminates at Sand Rock spring, about a mile from the hotel, which is about 150 feet above the level of the sea-shore. Over the spring, which gushes out in a singularly wild spot, there is a pretty cottage, erected by a surgeon of Newport, who discovered the source, or made its virtues known, in the year 1808. From the spring it is only a short walk to Black-Gang Chine, described in our last Supplement.

Chalybeate springs, reputed to have more or less medicinal virtue, occur in different parts of the island. According to an analysis made by Dr. Marcet, the Sand Rock spring contains an unusual proportion of alum and iron, held in solution by sulphuric acid. Dr. Lem-priere, an army physician, who employed these waters extensively at the dépôt, an invalid hospital established at Parkhurst during the last war, reported that he found them eminently useful in chronic cases of debility. At Pitland, in the parish of Chale, at the distance of not more than half a mile from Sand Rock, there is a spring impregnated with sulphur, which is said to be useful in eutaneous disorders. As in many other cases the virtue of these mineral waters may be somewhat exaggerated, but their romantic situations, the exercise to which they woo the invalid, the quiet of the country, and the mild and pure air breathed at them, can hardly fail to produce some beneficial effects. The water of the Pitland spring, while flowing, is pure and transparent; but on stagnating it deposits a white sediment as thick as cream. Cattle drink it without any repugnance. Another mineral spring at Shanklin was discovered, or brought into notice by Dr. Fraser, a physician to Charles II., and was for some time much resorted to.

Sand Rock Hotel, or the humbler, but comfortable, little inn at Niton, a pretty village close at hand, at the foot of St. Catherine's Down, the highest part of the island, may serve as a resting place and centre of observation for days, as all the most beautiful and striking scenes of the island are within short distances. But we, in pursuance of our plan, must return to Newport, in order to find room for the description of some other places in opposite directions.

To vary the road, after again reaching Appuldercombe, the traveller may strike off by a beautiful road to the right, which, after passing through the village of Newchurch and some rich valleys, leads to Arreton

Downs, whence the views of the interior of the island are extensive, and almost perfect in their kind. Corn-fields, meadows, and orchards, with a gentle little river winding among them, and cattle seen here and there; shelving heaths, spotted with white flocks; villages and village spires, hamlets, and mansions; bold hills and rocks; and, afar off, the blue waves of the ocean, are the main features of the scenery, to which are added many minuter and inexpressible graces. On the downs of Arreton the tourist will see two large sepulchral barrows, which, as well as several others on the island, are generally referred to the period of the Danish invasion, and supposed to mark the spots where some of the leaders of those fierce depredators were interred.

The village of Arreton, at the western end of the downs, is only three miles from Newport, and its scattered cottages line the side of the road for half of that distance. The neatness of these rural abodes, and the prosperous look of their inhabitants, who are nearly all cultivators of the soil, sufficiently show that this is the most fertile part of the Isle of Wight.

Another delightful excursion from Newport is in the direction of Fern Hill and Wootton Bridge, which both lie on the left bank of the Wootton river near to the point where it flows into Fishbourne Creek. The village of Wootton Bridge is one of the prettiest in the island. About two miles from it, on the little promontory that lies between the Medina river and Fishbourne Creek, and on the shore of the Solent strait, there is a place called "King's Key," where King John is said to have landed when he came to conceal himself from his barons in the Isle of Wight. The fact of this singular concealment is perfectly authentic. While on the field of Runnimeade, and in the very act of signing the charter, John was devising the means of subverting all its provisions, and making himself again the absolute, unchecked sovereign he had been. His envy and spite were increased by finding after that imposing ceremony that only seven gentlemen attended him, all the rest following the confederated barons. Withdrawing rapidly to Southampton, he privately dispatched letters by night to some of his trustiest Castellans, enjoining them to victual and strongly fortify their castles, and the next morning before day-break he very secretly retired to the Isle of Wight, where he remained about three months, leading, according to the old chronicler Grafton, "a solitary life among ryvers and fishermen*." Hollinshed says, "In which meantime many things were reported of him; some calling him a fisher, some a merchant, and some a pirate and rover. And many (for that no certain news could be heard of him) judged that he was either drowned, or dead by some other means†." It soon, however, was made manifest that John was neither dead nor sleeping. Some of his acts while lurking in the island, and the neighbouring cinque ports, as nearly resembled piracy as could be; but that time was chiefly employed in winning over the seamen of England, and in petitioning and waiting for troops from abroad, with which to crush the barons. Seeking redress both by the spiritual and temporal sword, he sent messengers to the pope, and to princes on the continent. The first sent him bulls and a threat of excommunication to hurl at Magna Charta and his barons; the rest arms and soldiers, "and from Flanders, Gascony, Brabant, and other parts, such competent aids came in, as encouraged the king (after three months' secrecy and retiring) to show himself in the face of his enemies‡."

In the fine season of the year a passage boat goes and returns between Wootton Bridge and Portsmouth every day. The creek and river admit shipping up to the village, and at high water they singularly add to the beauty of the spot, flowing full among wooded hills

* Grafton's 'Chronicle at large,' &c.

† Chronicle, vol. iii. p. 323. ‡ Speed, book 9, chap. 8.

and green pastures. A very picturesque mill projects into the river, and several of the houses of the village little above high-water mark are reflected with the trees and orchards that stand about them in the tranquil stream. From Wootton common there is a fine view inland, which is backed by the downs, and comprises many villas and pretty cottages. The common is now inclosed. The mansion at Fern Hill, which has a graceful Saracenic air, though much injured by the huge excrescence of a high heavy tower, was built by the late Duke of Bolton when he was governor of the Wight. Noble trees rise in the rear of the house, the evergreens and shrubs of the plantation are magnificent, and the grounds are all laid out in excellent taste. This, though there are some exceptions, is generally the case in the island, the stately country-seats and villas of which are too many to be enumerated. Norris Castle, the seat of Lord G. Seymour, East Cowes Castle, the seat of the Earl of Shannon, St. Clare's, Fairy Hill, and St. John's, will all command attention, and are all situated on this, the north-eastern side of the island, at short distances from each other, and from the pleasant village of Wootton Bridge.

Crossing the river at Wootton Bridge, the tourist will find himself under a beautiful elevation called Kite Hill, which is crowned by another villa, and then keeping to the right he will soon approach the Solent strait and the ruins of Old Quarr Abbey. Another and a delightful way of making this short progress from Wootton Bridge, is to descend the river and Freshbourne Creek in a boat, and then land at the mouth of the creek near to which the ruins are situated. In this way the banks of the stream, the opening sea, the ship-yard and village of Fish-house are seen to great advantage. At the turn of the tide, just as the full stream begins to return to the ocean, the little skiff may be allowed to float down with it, giving time to admire all it passes in its course.

The walk across smooth lawns, and through shady copses to Quarr Abbey, on a fine summer morning or evening, is delicious. This ancient abbey, like Carisbrook Priory, has been almost obliterated by the hand of man, and the tourist will look in vain for the bold arch, the shafted oriel, the tall chancel, and all those things which look so picturesque in our better-preserved ecclesiastical ruins. The abbey derived its name from the stone-quarries in its neighbourhood, which were once held in very great repute. Here was dug a principal part of the stone of which Winchester Cathedral was built, as appears by a grant made by William Rufus to Wakelyne, Bishop of Winchester, and by the register of Winchester, wherein it is recorded that William of Wykeham, the great church architect of the middle ages, used it in all the body of this cathedral. Hence it should seem that the quarries of Portland, that furnish a harder and much better stone, were not then known. The Quarr stone is still quarried, and is in very common use. It varies in quality, some of it being hard and durable; the inferior sort, which is soft, porous, and easily reduced to lime, is employed in all the garden-walls, out-houses, and cottages in the neighbourhood.

A farm-house occupies what seems to have been the centre of the old abbey; a wall, covered with ivy, is supposed to be part of the eastern end of the church; and the refectory, the best-preserved part of the ruins, is now turned into a barn. Traces of a wall, which is said, when perfect, to have enclosed thirty acres of ground that formed the precinct of the abbey, may be found in low, broken, and detached masses; and here and there, within the space, there are some fragments of mean arches. This once-famous abbey, which was dedicated to St. Mary Magdalen, and tenanted by Cistercian or White Friars, was founded in 1132, during the reign of Henry I., by Baldwin de Rivers, Earl of Devon, and Richard his son, who were both buried

within its walls. In monkish Latin it was called *Quarriera*, and thence Quarrer, and at last Quarr.

From Quarr Abbey a pleasant foot-path, through copses and an undulating wooded country, leads to the churchyard of Binstead; and a little farther on is the town of Ryde. Striking inland, a pleasant road, or a succession of foot-paths (if the pedestrian seeks them), will convey the tourist to Brading, another picturesque village, which we partly described in making the voyage round the coasts of the island. Brading Church, which is supposed to occupy the site of the first Christian place of worship that was erected in the island (in 704), is a very old and, for this island, a very large church, having a body, chancel, and side aisles, with massy, round pillars, and curious pointed arches. It contains some antique tombs, and the family chapel and burying-place of the Oglanders, the oldest existing family in the island, whose founder, Richard Okelandro, came over with William the Conqueror, and whose large, old family mansion, called Nunwell, stands close to the village. The worthy knight Sir John, of whose quaint history of the Isle of Wight (the manuscript of which was consulted and used by the Worsleys), we have already made honourable mention, lies entombed here among a long line of predecessors and successors. In Brading Church there is the celebrated epitaph which has become familiar to every lover of music, by being selected by Dr. Calcott for one of his most celebrated compositions. The words are beautiful, and we therefore quote them:—

“Forgive, blest shade! the tributary tear
That mourns thy exit from a world like this;
Forgive the wish that would have kept thee here,
And stay'd thy progress to the seats of bliss!
No more confined to grov'ling scenes of night,
No more a tenant pent in mortal clay,
Now should we rather hail thy glorious flight,
And trace thy journey to the realms of day!”

Crossing the eastern end of Brading Downs, and a pretty winding stream which traverses a good part of the island, and after turning several mills falls into Brading Haven, we come to the village of Yaverland, with its quaint manor-house, that was built in the time of Queen Elizabeth. Here, too, there is a curious church, much smaller, and apparently much older, than Brading Church. There is a round-headed Norman-looking arch leading to the chancel, which fortunately has been left almost untouched, though the hands of modern bricklayers and plasterers are but too discernible in other parts of the church. Some fine elm-trees stand close by. The neat village of Yaverland is situated at the head of the little peninsula which is flanked on one side by the Culver Rocks, and terminates in Bembridge Point, near to which there is another hamlet that commands a fine view of Brading Haven.

From Yaverland or Sandown Fort the tourist may make a pleasant return journey to Newport by passing Sandham heath, Alverstone, and Ashley Down. The view from the summit of the last-named down, where there is a triangular pyramid about twenty feet high, which serves to guide ships sailing into St. Helen's or Spithead, is one of the finest in the island, but does not differ materially from that obtained from Arretton Down, which is a continuation of the same ridge.

Another delightful trip, and the last we shall treat of, is to the north-west of the island, in the direction of Freshwater and the Needles.

At about four miles from Newport, taking that road, is the beautiful spot called Park Cross, which we have already described in speaking of the country about Carisbrook. Another mile farther on is Swainston, a fine country-seat which stands on the spot that was once occupied by an ancient palace of the bishops of Winchester. Hence we proceed to Calbourne, a small village with another of those curious antiquated little churches which add so much interest to the island, and

with a fine mansion and park called Westover, on a gentle hill in its neighbourhood. From this point there is a succession of shelving downs, quiet valleys, and scattered woodland, till we reach the river Yar, on the opposite bank of which stands the village of Freshwater, the birth-place (in the year 1635) of Dr. Robert Hooke, a leading member of the then recently-instituted Royal Society, a natural philosopher and machinist of no mean fame, of whom the islanders, who always class him among their worthies, are not a little proud. Hooke, who enjoyed the lucrative post of city-surveyor of London after the Great Fire in 1666, did many wiser and more useful things, but wanting to fly in the air like a bird, he, at an enormous expense of time and labour, invented above thirty machines and methods for flying, and found himself obliged to walk upon the earth after all. "But what of this whimsical niche," says a native historian, "for, not to mention that a grave and learned bishop was much occupied in the same fancy, these foibles in men of real genius are but like spots in the sun, visible indeed, but not able, on the whole, to obscure its glory*."

The village of Freshwater is not otherwise remarkable; but going from that point the tourist can ex-

* John Sturch, 'View of the Isle of Wight,' &c.

amine the Yar river, and the singular peninsula which it almost entirely cuts off from the rest of the island. The Needles, at the western extremity of this peninsula, and the stupendous cliffs and rocks of Alum, Totland, and Scratchell bays, are not seen to such advantage as from the sea beneath; but, as at other places where we have approached the coasts in these excursions from the interior, it is interesting to observe the different aspects under which these rocks present themselves when seen from above, and the seaward views from the summits of the cliffs are in general of great extent and beauty. At Freshwater-gate there is an easy descent to the sea-shore at the back of the island, not far from Watcombe Bay and Compton Chine. There is also a neat and comfortable inn among a small group of cottages.

A pleasant way of returning to Newport is by Thorley, a village in a wooded vale, with a small church of great antiquity, and no steeple,—Shalfleet, another village, with a Norman church,—and Parkhurst, or the King's Forest, which we have already described.

The routes we have traced will give a very good notion of this beautiful little island; but from each of them there are many roads and bye-paths branching off, and leading almost invariably to some graceful, quiet, or picturesque nook.



[Shanklin Chine.]

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BOSTON, LINCOLNSHIRE.



[Boston Church.]

THE sea-port town of Boston, in Lincolnshire, lies on the Witham, which falls into the Wash, about five miles below the town. The river Witham rises in the small county of Rutland, and enters Lincolnshire within a few miles of its source. At Grantham it makes a bend towards the boundary of the county, along which it runs for several miles. On arriving at the city of Lincoln it is joined by the Fosdyke, an artificial water-course, supposed to have been cut by the Romans, when in possession of this part of the country, for the purpose of drainage. The country below Lincoln is intersected by a number of canals or cuts, parallel to, or at right angles to, the course of the Witham, the whole navigation of which may be considered as of an artificial character. The distance from Lincoln to the outlet of the Witham below Boston, measured along the course of the river, is about thirty-two miles. The Wash, into which the Witham falls, is the name given to that large and extensive basin or opening on the east coast of England, between the counties of Norfolk and Lincoln. It receives the drainage of the greater portion of the fenny country of England. Being full of accumulations of sand, there are two channels in it well known to navigators by the names of the Boston Deeps and Lynn Deeps. On Boston Deeps the rise of tide at springs is twenty-three, and at neaps fourteen, feet.

The origin of the town of Boston cannot be clearly traced. Some antiquaries have stated that St. Botolph, an ecclesiastic of the Saxon times, whose memory was much venerated, built here a monastery, and that Boston is a corruption of Botolph's Town. This is a matter of conjecture and dispute. It was, however, termed in early times Botolph's Town: in the well-known statute of the 27th Edward III., entitled *Ordinacio Stapularum*, or the Ordinance of the Staple, in which Boston is included in the list of towns of the Staple, it is termed "Saint Botolph." But it is not mentioned in the Norman survey, under William the Conqueror: if it was then a place of consequence, it must have been included in Skirbeck, in the centre of which Boston lies.

At whatever time Boston originated, it was a place of considerable importance at the commencement of the thirteenth century. In 1204, the amount which Boston paid as its share of the contribution or tax, called the fifteenth (a duty levied on the fifteenth part of goods), was 780*l.*, by which it was ranked next to the metropolis, London paying 836*l.* For two centuries afterwards it was one of the most flourishing ports of England. Being, as already mentioned, one of the towns of the Staple, it shared largely in the advantages arising from being a privileged place. "A Staple town," says the account of Boston in the 'Penny Cyclopædia' (vol. v., p. 236), "is described by Weever as 'a place to which, by authority and privilege, wool, hides, wine, corn, and other foreign merchandise, are conveyed to be sold; or it is a town or city whither the merchants of England, by command, order, or commandment, did carry their lead, tin, or other home produce for sale to foreign merchants.'" It is probable that Boston shared in both these characteristics. Hither came "the Esterlinges" (supposed to be the same as the Hanseatic merchants) to trade with the people of England; many of them resided in the town, and the "staple-house" and "stilliard-house" were busy scenes during the early period of our commerce. The stilliard-house was the ancient Custom-House; the merchants of the steelyard were so called from their trading almost entirely by weight, and using the steelyard as their apparatus.

Towards the end of the fifteenth century the commercial prosperity of Boston appears to have received a check. Leland, who wrote in 1530, speaks of trade

and commerce in the town as being decayed, and "of 'the great and famous fair,' and of the 'old glory and riches that it had,' as matters of history." He adds, "the staple and the stilliard-houses yet there remayne, but the stilliard is little or nothing at all occupied." Boston has never recovered its old importance. Henry VIII. granted the town a charter of incorporation, and Elizabeth a Court of Admiralty. But the trade continued to sink notwithstanding. Towards the middle of the eighteenth century it appears to have been very low, "through the ruinous state into which the river and haven had fallen, in consequence of neglect and mismanagement, and from errors committed in the execution of works of drainage." In 1751 it was stated, that thirty years before a ship of 250 tons could get up to Boston; but that then a small sloop of 40 or 50 tons, drawing only six feet of water, could not sail to or from the town, except at a spring tide. One of the causes of this decay was attributed to the diversion of the waters of the neighbouring fens from their ancient entrance into the Witham, above Boston, which had formerly discharged themselves in such large quantities as to assist in scouring away the sediment brought up by every tide. Acts of Parliament have been since obtained, for the purposes of draining, deepening, and embanking. Favourable results have followed, and may be expected still to follow these and similar measures of improvement, although, in the Municipal Corporations Report, the state of trade and commerce is stated to be "by no means favourable."

The most remarkable building of Boston is the church represented in the engraving at the head of this article. "The parish church of Boston," says Mr. Britton, "has long been celebrated for the vast extent of its dimensions, in which it exceeds all other churches of the same plan in the kingdom; nor is it less admired for its magnificent steeple, which rears its lofty head amidst the flatness of the surrounding country with surprising elegance and grandeur. It is dedicated to St. Botolph, an abbot of the seventh century, whose memory was long held in great veneration amongst our ancestors, as the numerous ecclesiastical foundations bearing his name testify. There was formerly another church in Boston, dedicated to St. John; which, Leland tells us, was originally the mother church, this of St. Botolph being only a chapel of ease to it. St. John's has long since been demolished, but the cemetery is still used; it was standing in Leland's time, though St. Botolph's, he says, "is so risen and adournid that it is the chieftest of the tounne."* The foundation of the steeple is stated to have been laid on "y^e Monday after Palm Sunday, An. 1309, in y^e third yeare of Edward y^e 2nd:" but Mr. Britton thinks that the architecture is at least fifty years later than the above date. The work may have proceeded very slowly, as was often the case in such expensive erections, from the want of funds. A considerable part of the expense which it cost is conjectured to have been supplied by the "marchauntes of the stilliard," at that time numerous in Boston.

The view in the engraving represents the church and steeple from the south-west. The nave is supported by seven arches on each side, with two clerestory windows over every arch. The reader will remark these fourteen windows in the engraving. "The choir has five windows on each side, with a larger one behind the altar. The windows of the aisles and of the upper story are respectively of two different patterns, varied alternately; those of the choir are also of different designs, and the tracery on the parapets of the aisles is counterchanged in the same manner as the windows, which circumstances show the building to have been erected about the middle of the fourteenth century. The chief entrance is by the south door." The general view of the interior of the

* Britton's 'Architectural Antiquities,' vol. iv, p. 113.

church is grand and striking, an effect arising from the ample size and proportion of every part, rather than from any peculiar elegance. It has suffered considerable dilapidation.

The steeple, which is visible at sea for more than forty miles, is surmounted by an elegant octagonal lantern, which is a guide to mariners upon entering the Boston and Lynn Deeps. "This lantern," says Rickman, "is pannelled throughout, and each side is pierced with a large two-light window, having double transoms; this composition gives to the upper part of the steeple a richness and lightness scarcely equalled in the kingdom." "The masonry of this noble structure," says Mr. Britton, "is worthy of the design, scarcely any crack or settlement being perceptible; the latter defect, indeed, was amply provided against by the immense foundation, the courses of which have been found to extend under the river. The architect has taken equal care that the tower should not depend for any support on the nave; for we find the buttresses contracted on that side, so as to make the elevations of the sides rather irregular. The lantern, I have no doubt, was intended to be lighted at night for a sea-mark."

The dimensions, according to Mr. Britton, are as follow:—church, width 99 feet; length of the whole, 282 feet 6 inches; viz., steeple, 40 feet 3 inches; nave, or body, 155 feet 5 inches; chancel, 86 feet 10 inches; height of the nave from the pavement to the ceiling, 61 feet; height of the steeple, 262 feet 9 inches.

Boston is a parliamentary as well as municipal borough; it returns two members. The population, in 1801, was 5926; in 1831, it was 11,240. The boundary of the parliamentary borough was enlarged under the Reform Act, and included 12,818 inhabitants. Under the Municipal Corporations Act, the town is divided into three wards, with six aldermen, and eighteen councillors. The town, on the east side of the river, consists of one long street, the market-place, and some minor streets; there is another long street on the west side of the river. The market-place is spacious, and the markets are well supplied with cattle and sea and river fish. There are some manufactures carried on at Boston of sail-cloth, canvass, and sacking, and there are iron and brass founderies. (For a more particular account of Boston the reader is referred to the article Boston in the 'Penny Cyclopædia,' vol. v.)

Boston has had the honour of giving name to the important city and sea-port in America, the capital of the state of Massachusetts, the birth and burying-place of Franklin, and the scene of the early breaking out of the American war of independence.

INSTRUCTION OF THE BLIND, ESPECIALLY IN GEOGRAPHY.

[From a Correspondent.]

IN reading the interesting article on 'Instruction of the Blind,' in Nos. 269 and 270 of the 'Penny Cyclopædia,' my attention was drawn to the subject of "Maps for the Blind" by the following passage:—

"Embossed maps and globes for teaching geography would naturally be suggested to those persons who were engaged in teaching reading to the blind by raised figures. M. Weissebourg, a blind man of Mannheim, appears to have been the first person who made relief-maps; up to which time the instruction given to the blind on geography was merely oral. Various methods for producing maps of this character were employed, but at first without success; after a time however the chief difficulties were conquered, and a process, which is minutely described by Dr. Guillié, has supplied all the maps which have been in use at the Parisian institution to the present time. The map of a country is pasted upon thick pasteboard, a wire is then

bent round the curves of the coast, and along the courses of the rivers; these wires are fastened down, and a second map in every respect similar to the first is pasted over it; when this is pressed, the windings of the wire will be easily traced by the touch. It is stated in the 'North American Review,' No. 80, that an improvement has been made in the manufacture of maps for the blind, which 'consists in having a metal plate engraved with all the lines, elevations, boundary-marks, positions of towns, &c.; from this plate impressions are struck in pasteboard, which produce a perfect embossed map.' It has sometimes occurred to us that the geographical reliefs of Kummer, of Berlin, might be rendered useful in the instruction of the blind. The wider a useful invention can be spread, the cheaper it will be afforded. There is a short notice of Kummer's reliefs in the first Number of the 'Quarterly Journal of Education,' p. 190."

Since the above was published, Mr. Gall has exhibited specimen-maps for the blind to the Society of Arts in Edinburgh; and there has been lately received in this country a map of Europe printed at the Institution for the Blind in Boston, United States. This map is of the most skeleton description; and, from the manner in which it has been got up, (setting aside the consideration of expense,) the information which it furnishes must be exceedingly erroneous.

A common map may be adapted, by an exceedingly simple process, to the purpose of teaching geography to the blind. The following plan has been already tried with complete success; and it will obviate the necessity of printing maps in relief. Take a common map,—say of Europe; paste it carefully on a sheet of pasteboard, the thinner the better; let it be quite smooth, as any wrinkle would convey a false impression; then, with a sharp-pointed bodkin, make a slight mark (a mere puncture) say, at Corunna in Spain, and another at St. Sebastian; turn the map on its face, and make a succession of punctures, close to each other, from the one mark to the other, and you will thus have raised the north coast of Spain in dots, ten or twelve to an inch. Continuing this process, you may, in a short time, have the entire outline of countries raised in dots*. Then, to indicate rivers, press a flat-pointed bodkin (or any other more appropriate instrument) strongly into the pasteboard, without lifting it up; when the course of the river has been thus indented, the finger feels it, on the right side of the map, as a winding smooth line, which sufficiently distinguishes it from the boundaries, which are rough and jagged. Still a third distinctive mark is wanted, to indicate mountains. This, at first, presented a little difficulty; a composition of paint was adopted, but it did not answer, when a third kind of mark or indentation was tried, by means of the roundish end of the wooden handles of the bodkin. The chains of mountains are first marked, as in the case of the boundaries, on the face of the map; the map is turned, as before; and a quire of paper being put under it, merely to serve as a cushion, the end of the handle of the bodkin is pressed heavily into the pasteboard, and raises a succession of slight but very blunt elevations, which answer the purpose proposed. These marks may be made very durable by gluing the map on a board. The glue fills up the interstices made by the punctures and indentations, and, becoming quite hard, resists the pressure of the finger. But even without being glued, the marks on the map will last a considerable time without yield-

* The process is much speedier done, but not quite so well, by using, in place of the bodkin, the rowel of a spur, having about sixteen sharp points in the circumference. This being fixed into a handle facilitates the operation greatly. But if the points of the rowel are anything long, or the pasteboard thick, in place of distinct punctures being made, a succession of ragged ones are the result, as the points in being withdrawn bring up the board with it.

ing. When the map is glued, cities and towns may be indicated by the insertion of very small brass nails, with roundish smooth heads, and smaller places by different-sized pins,—but these latter may be only inserted afterwards, according to the progress of the pupil.

There is nothing new in this. It is only a slight improvement on the plan long in use at the Asylum for the Blind at Edinburgh; the first institution in Britain which set seriously about cultivating the intellectual powers of the sightless inmates under its protection. For information as to what has been done by it, as well as other institutions, I need only refer your readers to the article in the 'Penny Cyclopædia' to which I referred in the outset of this communication.

Geography is a very interesting study to the blind, when conducted on plain, simple, intelligible principles. Every place the pupil puts his finger on becomes, as it were, alive to him. The use of a globe, especially, is a source of indescribable enjoyment to the blind—they never tire of it. Its form—its motion—its zones—its inhabitants, antipodes to each other—a tiny ship moved through the surface of its imitated water—convey distinct ideas to their minds, and make one wonder how such things were not thought of sooner. But notwithstanding that the blind can be taught by anything, and from anything almost, and that the simpler the means by which they are taught the better, ingenuity, benevolence, patience, and time, have all been wasted in going the most roundabout ways to impart information to them.

A striking instance of this has just occurred. A great deal has been lately doing towards ascertaining what would form the best alphabet for the blind. The Society of Arts at Edinburgh has had a gold medal in its hands these four years to award to the person who would be successful in producing an alphabet. The wits of many persons were set to work, and no less than twenty or twenty-two forms, with specimens and explanations, were laid on the Society's table. Would it be believed that the far greater majority of these were formed without the least reference to the common Roman alphabet? It seemed to be at once disposed of as altogether unfit for the purpose aimed at,—and all sorts of forms, dots, angles, lines, &c., resorted to, which in the first place must have been learned by the seeing before one syllable could be made available to the blind. The consequence has been, that the Society has thrown up the matter altogether, *unable to come to a decision!*

In this dilemma, those who felt deeply interested had taken forward steps, and we have at this moment, and only within the space of the last four years, no less than four different portions of scripture, some of them having introductory lesson-books out, in as many different characters, and a fifth character, it is believed, will very soon follow. Thus, by want of patience and co-operation, the blind are likely to be left in the background altogether by the zeal of their friends. The character adopted by Mr. Gall at Edinburgh is unknown to the Bristol pupil:—the Bostonian does not understand the Philadelphian. In short, if such Babelism goes on much longer, every step taken in it will only tend to greater perplexity, and render all that has been done useless.

It may however become a serious question, particularly where the funds of institutions are concerned, how far will reading for the blind ever be made available to them, supposing the preliminary question of an alphabet was quite settled? *It will take a vast deal more than has yet appeared to prove the affirmative to those who have had daily intercourse with the blind assembled in such institutions; for it is with regard to them that these remarks are made.* The wealthy blind may have numberless curiosities got up for them, whereby to

amuse and instruct amidst their hours of solitude. But where the *poor blind* are assembled, as in our schools, for instruction in some business, in order to earn their livelihood, one of two things must be done—and this is borne out by facts,—they must either spend a very great proportion of their limited time in acquiring a meagre knowledge of reading, from the very limited number of works which can ever be produced for them, or they must attend to the acquirement of their business.

There is a delusive charm in the words—"the blind taught to read." It has been said, with more sound than sense, "let us put eyes into the fingers of the blind." Now, if our eyes were just as much in the way of being impaired when engaged in basket-making, twine-spinning, rope-mat-making, &c., as the fingers of the blind are when so engaged—and *these* are *their* eyes, according to the figure—where would all our reading be then? Every step the blind pupil takes in acquiring his trade is *rapidly* impairing his sense of touch—his vision; and, in the course of a few months at most, it is all chances against him telling a single letter, however quickly he might take it up at first when his touch was fine.

Am I then an enemy to the intellectual education of the blind? By no means. I would have everything done to raise them to be useful members of society, not merely by making them good workmen, but by storing their minds *by means of extensive reading*, with the knowledge which no plan of printing for them can possibly reach, and exercising their memories in the way most beneficial to them as accountable creatures. By the liberality of the directors of the Edinburgh Institution, the blind in it have a right to a large public library of about 12,000 volumes. After work hours for an hour and a half in the evening, they (or as many as wish, for it is quite optional) assemble in the school-room, where one of the overseers (paid by the society) reads the book they themselves have "voted in," for this is entirely in their own hands. But, it must be recollected that the inmates there are men advanced in years, it is an *asylum* and not a *school*, so that the choice of books is not left in the hands of urclins. Their previous course of education in geography, &c., has fitted them to enjoy a much higher grade of reading than would be expected from their humble rank in life. Within these few years they have gone through Robertson's 'Charles V. and Scotland,' 'History of Malta,' 'Basil Hall's Travels,' and last, though not least, 'Hume and Smollett's England.' They have the newspapers also twice a week, and these form an interesting "reading;" the parliamentary speeches are never "skipped." 'Chambers' Journal,' that very interesting periodical, sent gratis to the institution by the proprietors, forms a delightful weekly morsel. This evening reading has been the rise of others, a party being formed for another book during the time they can abstract from the breakfast and dinner hours. These are means of instructing the blind far superior to anything they can ever hope from printing for them, however successful.

[Our Correspondent's objections to "alphabets for the blind" and "printing for the blind," though good, are too sweeping. He forgets that the art is quite in its infancy; and though, questionless, a large library might not be formed for the blind, a few choice books, including the Bible, might be printed for them, with which, at intervals when no person can be procured to read to them, or in some sleepless hour of the night, they could inform their intellect, and strengthen their moral principles. Our Correspondent overlooks, too, the "string alphabet," of which an engraving and description are given in the article he alludes to in the 'Penny Cyclopædia.' Much ingenuity has certainly been wasted in endeavouring to make the blind do what they never can do so well as those who have their sight. But because they cannot read all books, are they to have none, and to be entirely dependent on others for instruction or information? The objection that the sense of touch becomes rapidly impaired applies to our Correspondent's method of teaching geography, as well as to books.]

TRIUMPHAL ARCH AT THE BARRIER OF NEUILLY, PARIS.



[L'Arc de Triomphe de l'Étoile.]

THIS great national monument and work of art was opened to public view during the recent celebration of the Revolution of 1830. Every part of the design is completed, with the exception of the figures and emblems which are to crown the pediment.

The triumphal arch erected in honour of the Emperor Constantine at Rome was sixty-eight feet high; that of Septimus Severus sixty-feet; and the fine arch in the department of Vaucluse, in the south of France, in honour of Caius Marius, was seventy-four feet high. The Porte St. Denis at Paris is perhaps the most remarkable work of this kind erected in modern times, with the exception of the one just completed. It was undertaken by direction of Louis XIV., and this vain monarch gave orders that its dimensions should exceed any similar work: its height is seventy-seven feet and breadth seventy-seven feet. The Arc de Triomphe de l'Étoile was designed by the Emperor Napoleon to commemorate the glory of the French armies, and the first stone was laid on the 15th of August, 1806, being the Emperor's birth-day. Its dimensions are more than twice as large as those of Constantine's arch or the Porte St. Denis, and are as follows:—height 161 feet; breadth 146 feet; thickness 72 feet; height of the grand archway 67 feet, breadth 47 feet; height of the lateral arches 60 feet, breadth 27 feet. The depth of the foundations is 27 feet; and the arc 179 feet long by 79 feet wide.

The front represented in the cut faces the palace of the Tuileries, and the approach from the palace is by the principal avenue in the gardens, through the Place Louis Quinze, and thence by the avenue of the Champs Elysées. There is a gradual rise of the ground for some distance before arriving at the Barrier of Neuilly, and the arch is placed on a circular space at the summit. It forms one of the most commanding objects from various parts of the environs of Paris.

On each of the two principal fronts there are two

groups of sculpture. The first represents the departure for the armies in 1792, when France was menaced on all her frontiers, and by a solemn decree of the National Convention the country was declared in danger. The Genius of War is represented pointing with a sword to where the enemies of the country ought to be met and overcome. A commander waves his helmet to invite the citizen soldiers to follow him, and he is eagerly joined by a young man. A little to the right of the spectator a man advancing into years has already drawn his sword, thrown aside his mantle, and is prepared to march; and behind him an old man, who can no longer combat for his country, offers his counsel to the commander. To the left, a warrior seated draws his bow, and behind him is another in a coat of mail, who sounds a trumpet; and at the back of this last figure is a young man on horseback. The whole group is surmounted by the national flag.

The triumph of the French arms, at the period when the empire appeared to be most firmly consolidated in 1810, is also represented on the side of the arch nearest the Tuileries. The Emperor is crowned by Victory; Fame publishes his deeds, and History records them. Citizens of vanquished towns approach to make their submission, and on a palm-tree there are suspended trophies of arms taken from the enemy. The group is completed by a prisoner in chains.

The resistance made to the approach of the Allies, in 1814, is the subject of the group on the right. A young soldier defends his invaded country; on one side his father, who is wounded, embraces him, and on the other his wife, with a child which has been killed in her arms, vainly endeavours to stop him. Behind, a horseman, mortally wounded, falls from his horse; above this group the Genius of the Future encourages the young man to resistance.

The other group on the Neuilly side is an allusion to the Peace of 1815. A warrior sheathes his sword in

the scabbard; on his left a woman caresses an infant on her lap; another child, who is reading, leans upon her. To the right is a man occupied with a ploughshare, surrounded by corn; behind him, "*un soldat laboureur*," (a class of which it is difficult to form an idea in this country,) returned to his hearth from the wars, subdues an ox which he wishes to put to the plough.

These four groups are designated as follows:—*Le Départ* (1792); *Le Triomphe* (1810); *La Résistance* (1814); *La Paix* (1815).

There are two bas-reliefs on each of the principal fronts, and one on each of the sides. They represent the death of General Marceau, on the 19th of September, 1796. He was wounded so severely on the field of battle, that he fell into the hands of the Austrians. The Archduke Charles paid him the greatest attention, but he expired soon after he had received his wound, and the Austrian army showed the highest respect to his remains, which were interred, accompanied by the usual military honours, in which both the Austrians and French took part. The other bas-reliefs represent the Battle of Aboukir, July 24th, 1799; the passage of the bridge of Arcole in Italy, on November 5th, 1796; the taking of Alexandria in Egypt, July 2, 1798; the Battle of Austerlitz, December 4th, 1805; the Battle of Jemappe, on the 6th of November, 1792, in which the present King of the French, then the Duke de Chartres, commanded the centre.

The frieze of the grand entablature, on the front shown in the cut, and the half of each of the sides, represents the departure for the armies. In the centre the representatives of the people, before the altar of the country, distribute the flags to the commanders of the different corps of the armies of the north and south. To the right and left, extending to one half of each side, the troops are in full march. On the Neuilly front, and the remainder of the sides, is represented the return of the armies. France, regenerated, accompanied by Prosperity and Plenty, distributes wreaths to the chiefs; and on the right and left the troops defile, bringing with them the works of art.

The shields contain a list of thirty victories which are supposed to have had the most important influence on the affairs of France. They are—Valmy, Jemappe, Fleurus, Montenotte, Lodi, Castiglione, Arcole, Rivoli, Pyramids, Aboukir, Alcmaer, Zurich, Heliopolis, Marengo, Hohenlinden, Ulm, Austerlitz, Jena, Friedland, Somosierra, Esling, Wagram, La Moskwa, Lutzen, Bautzen, Dresden, Hanau, Montmirail, Montereau, Ligny.

The tympan of the lateral arcades contain the figures of a grenadier, a light horseman, a heavy dragoon, a horse and foot artilleryman, a sailor, and a marine.

In the exterior decoration of the arch there could only be appropriated a space capable of containing the names of thirty battles. The interior of the grand arch, as well as the smaller arches, is inscribed with other actions to the number of ninety-six, in which the French arms were not less distinguished. Under the heads of north, east, south, and west, follow the names of twenty-four actions which took place in each quarter.

To the list of military combats are added the names of the commanders-in-chief, marshals, and generals who contributed to their celebrity. The list includes those of several generals of brigade and colonels who perished in the field. It has been necessary to confine this list to the superior grades of the army, but it contains 384 names, and includes some Polish, German, Italian, and Spanish officers who fought in the ranks of the French army. These 384 names are divided in four groups of six columns each. Beneath them are the names of the armies which France sent to the different theatres

of war, and a list of them shows the prodigious efforts which were required to sustain the system of Napoleon. On the north occur the names of the armies whose operations took place in that quarter, namely, the armies of the North, of Ardennes, of the Moselle, of the Rhine, of the Sambre and the Meuse, of Holland, of Hanover. On the east, the armies of the Danube, of Helvetia, of the Grisons, of the Var, of Italy, of Rome, of Naples. On the south, the armies of Dalmatia, of Egypt, of Spain, of Portugal, of Andalusia, of Aragon, of Catalonia, of the South. And on the west occur the armies of the Eastern Pyrenees, of the Western Pyrenees, of the West, of the Camp of Boulogne, of the army of Reserve, and the Grand Army. Above each of the four tables of the names of distinguished officers is a bas-relief, representing military devices.

The cost of the Triumphal Arch has been rather more than 38,000*l.*, which has been contributed in nearly equal proportions under the Empire, the Restoration, and since the commencement of the reign of Louis Philippe. It has sometimes been said that the French, while embellishing their towns, and particularly the capital, have neglected works which contribute to domestic and personal comfort. Improvements, however, are going forward, which prove that indifference towards the latter objects no longer exists, and that, while the love of art has not diminished, great exertions have been making at the same time in matters which really contribute to utility and convenience.

If the grand monument which so strikingly sets forth the achievements of the French arms might not be expected to produce a conviction in the minds of all rational Frenchmen, that enough has been done to signalize the national character in war, and that enough of military renown has been acquired to satisfy the genius of a warlike people, we should doubt the beneficial influence of a memorial which recalls the victories of the Republic and the Empire, which presents war under its most brilliant aspect, and studiously keeps out of sight the horrors and wretchedness which accompany it. We should fear, lest it should give to a passion already too predominant an excitement and preponderance, under the influence of which the quieter pursuits of peace would be despised and lose their relish. But twenty-one years of peace have opened a new career to France, in which she may as honourably distinguish herself as in war. Commerce and manufactures have brought about a state of internal prosperity unknown at any previous period in the history of the country. War has left behind it some evils which have rendered the sum of this prosperity less than it otherwise would have been. It isolated France from the rest of the world, and during the long course of hostilities, interests sprung up and were fostered into strength, which are now positively injurious; and France is kept through their influence in a state entirely incompatible with the progress of her commercial interests. The cost of maintaining the protected interests falls heavily on all classes—on the producer as well as the consumer. The following facts* will throw some light on their operation:—In 1787 the population of France was 24,800,000, and the value of the imports was 25,000,000*l.*; and in 1830, though the population was then 33,000,000, the whole amount of imports was valued only at 25,500,000*l.*, the increase being less than 1,000,000*l.* sterling. Had the trade of France increased only in proportion to its population, its value, instead of being little more than 25,000,000*l.* sterling, would have been nearly 40,000,000*l.* The increase of wealth, luxury, and civilization, would, under favourable circumstances, have rendered the amount much greater. The external commerce of France may be

* 'Commercial Relations of Great Britain and France.'—Dr. Bowring's First Report.

considered to have been retarded nearly 35 per cent. by the commercial system into which she entered in consequence of war. English commerce, under a liberal policy which has gradually been more and more developed, has quadrupled in extent between the years 1787 and 1830.

THE BRITISH MUSEUM.—No. III.

SCARCELY one half of the visitors of the British Museum enter the Gallery of Antiquities. Two reasons are given for this. The greater portion of the visitors come late, and proceeding up-stairs to the general collections, the hour of closing has arrived before they have time to examine the antiquities*. The second reason is, that the entrance to the Gallery, under the principal staircase, is obscure, and escapes the observation of many. It has been announced that the Museum is to be open till seven in the evening during summer, to commence next year. This will probably bring a still greater number of visitors. A great proportion of the working-classes of the metropolis, instead of devoting *Saint Monday* to dissipation, as was too frequently the case formerly, now occasionally take a half holiday—generally Monday afternoon—bringing out with them their wives and families to enjoy it. It is of great importance that such places as the Museum should be open to them on these occasions. The general behaviour of the public has been hitherto excellent—but as under the new regulation the Gallery of Antiquities may count on its full share of visitors, it will require both patience and vigilance on the part of the officers to prevent mischief being done to some of those glorious works of art which adorn it. The general body of the public have not yet got rid of what they consider to be the good old English privilege of touching and meddling with what attracts their attention. It is fast disappearing, however, and the period may soon arrive when it can be no longer scornfully said with truth that the English people are excluded from indiscriminate admission to parks, palaces, and collections, owing to their propensity to commit mischief.

Before proceeding to describe the Gallery of Antiquities, we may give a brief sketch of the life of an individual who contributed largely to imbue the English public with a taste for those remains which now adorn the Museum. It is taken from a volume just published of the 'Library of Entertaining Knowledge,' which is entitled the 'Townley Gallery.'

"Charles Townley, Esq., was the eldest son of William Townley, of Townley in Lancashire. His mother was Cecilia, sole heiress of Ralph Standish, Esq., of Standish in the same county, by Lady Philippa Howard, daughter of Henry, Duke of Norfolk. His family had been seated at Townley for many successive generations.

"He was born in the house of his ancestors, Oct. 1, 1737, and succeeded to the estate by the premature death of his father in 1742; an event which, united with religious considerations, induced his guardians to send him in early childhood to France for education. He was accordingly placed at the college of Douay, then the chief resort of young men of rank and property, the heirs of the Catholic gentry in England, where his native taste and activity of mind carried him far beyond his companions in classical attainments.

* It appears from the statements of the officers that the number of visitors during the present year (1836) has greatly exceeded all former years—so many as 9000 having been within the walls during the six hours, viz., from ten till four, that the Museum is open. Monday is generally the busiest day; and sometimes one-half of the day's visitors will arrive after two o'clock. The writer has occasionally remarked the number, especially on fine days—the average was about fifty every five minutes during the last two hours of the Museum being open.

"About 1758 he took possession of the family residence at Townley, a large baronial mansion which yet retains features of its old magnificence. Here he planted and improved the property, and, during the first years of possession, joined in the athletic sports of the field, and the boisterous hospitality for which the country gentlemen of that day, in the provinces remote from London, were remarkable.

"In or about 1765 he visited Rome and Florence, resumed his literary pursuits, studied with critical exactness the works and principles of ancient art, and finally determined to indulge his taste in forming a collection of ancient sculpture.

"During this period of his life he resided mostly at Rome; from whence, in different excursions, he visited the more distant parts of Magna Græcia and Sicily. He has been heard to relate that, on arriving at Syracuse, after a long and fatiguing journey he could take neither rest nor refreshment till he had visited the fountain of Arethusa. This his friend, Dr. Whitaker, observes, though a trifling, is a characteristic circumstance; for he never spared himself, nor even desisted from any pursuit, till he had either attained his object, or completely exhausted his strength.

"The faithful attachment of his family to the cause of the Pretender ensured for Mr. Townley, upon his arrival in the pontifical city, an easy introduction into the best society, and gave him unrestrained access to the cabinets and galleries of the Roman nobility. His growing love of the arts was excited by these opportunities, his knowledge confirmed, and his taste perfected by conversation with the literati, whose works had gained them so much fame. With Sir William Hamilton, too, who had recently been appointed Ambassador to the Court of Naples, he entertained a constant intercourse; and, as the objects of their respective researches were different branches of the arts, most friendly and valuable communications were mutually made.

"By singular good fortune, Mr. Townley settled at Rome at an era, next to that of Leo X., the most interesting as to the discovery of antiquities; and he failed not to avail himself of the circumstance.

"It was about 1769 or 1770 that Mr. James Byres, an architect, Mr. Gavin Hamilton, who had painted some subjects from the Iliad in the Villa Borghese with truly classical taste, and Mr. Thomas Jenkins, the English banker at Rome, embarked in an adventure which enabled them to supply the greater part of those marbles to their countrymen of which the modern English collections are composed. They rightly conjectured that the site of the spacious villa of Hadrian near Tivoli was by no means an exhausted mine; and having obtained permission from the Pope, under certain conditions, to search those classical grounds, their eventual success realized their hopes.

"After residing with so many advantages at Rome, for several years, he determined, about 1772, to bring his acquisitions to London; and having purchased a house in Park Street, Westminster, he there exhibited his stores of Greek and Roman art, with an arrangement classically correct, and with accompaniments so admirably selected, that the interior of a Roman villa might be inspected in our own metropolis. It was highly gratifying to contemplate a scene realized from the descriptions of Cicero and Pliny Junior: but the urbanity and intelligence of the owner held forth equal attraction. He allowed a most liberal access to all those who were known in the literary circles as men of taste or as antiquaries, and never disappointed the curiosity of others less versed in the history, but no less susceptible of pleasure, from the effect produced by the assemblage of objects of genuine beauty. It was delightful to see him frequently joining himself to these visitants, and when he found them desirous of more

information than the catalogue contained, freely entering into conversation, and with a gracefulness of manner peculiarly his own, giving a short dissertation upon any piece of sculpture under consideration. With delicacy and good sense, he always proportioned his own display of erudition to the measure of that which he found his inquirers to possess.

“But it was not to marbles alone that Mr. Townley directed his attention. He laid out large sums in the purchase of ancient bronze figures and utensils, Greek and Roman coins, gems, antique pastes, and drawings, the greater part of which served essentially to illustrate his sculptures. His Roman coins in large and middle brass are acknowledged by the author of the short account of him in the ‘*Biographie Universelle*,’ to have yielded in number and preservation only to the boasted collection of the King of France. He possessed also a Greek manuscript of the ‘*Iliad*,’ written on vellum, of about the twelfth or thirteenth century; one of the oldest and most valuable known. This manuscript he lent to Professor Heyne for several years. It was afterwards Dr. Charles Burney’s, with the rest of whose library it was purchased for the British Museum in 1818, at the estimated price of 600 guineas.

“It will not be uninteresting to state here, in few words, the chronological progress of the formation of the Townley Gallery as far as its most important marbles are concerned.

“The first marble of which Mr. Townley became possessed was the group of the Astragalizontes, the two Boys playing with the Tali. It was procured, in 1768, from the Dowager Princess Barberini. In this year Mr. Townley also obtained the Bust of Hadrian clothed with the paludamentum. Between 1770 and 1780 he procured his colossal Head of Hercules, and the Bas-relief of Hercules securing the Mænalian stag, the naked Bust of Hadrian from the Villa Montalto, the Statues of the two Fauns, which bear inscriptions, the Bacchic Vase, the Sleeping Shepherd, the small Venus, the Thalia, the Libera or Female Bacchus, the little Cupid, the group of Bacchus and Ampelus, the Greyhounds from Monte-Cagnuolo, the Venus Architis, the Head of the Homeric Hero, the Bust of Trajan, and the Bas-relief of Castor managing a Horse.

“In 1772 he purchased, out of the Laurenzano Collection at Naples, the Female Bust rising from the calyx of a flower, which at different times has received different appellations. It was first denominated Clytie rising from a sunflower; afterwards *Isis Aphrodite*, Isis rising from the lotus. We have ourselves gone back to the appellation first bestowed upon it by Mr. Townley; but from the circumstance of the features not being conformable to the model of ideal beauty, it is probably no more than the portrait of a lady executed in the Roman time by a Greek artist. Isis rising from the lotus, however, both the whole and the half-figure, is not uncommon upon gems.

“In 1780, when a disgraceful riot threatened the existence of the metropolis, and its fury was especially directed against the Catholic inhabitants, Mr. Townley participated in the general alarm. His house in Park Street having been marked by these destroyers, he, like others, withdrew in haste, apprehending their immediate attack. He had secured his cabinet of gems, and was taking, as he then feared, a last view of his marbles, when he seized the bust alluded to, and conveyed it to his carriage. The selection showed Mr. Townley’s opinion of its excellence. He used jocosely to call it his wife.

“The sculptures already mentioned were the beginnings of the Townley Collection, and obtained for it its first character. In the ten or twelve succeeding years accessions were gradually made which advanced it to its highest celebrity. The Heads of Homer and

Pericles, the terminal Pan, the colossal Head of Minerva of early Greek work, the large Caryatid, the Head of the mild Jupiter, the Dione, and lastly the Discobolus, justified the claim of the collection to superiority.

“It has seldom fallen to the lot of any man to pass his life in a manner more happily congenial with those elegant pursuits to which it was dedicated than to Mr. Townley. After he had so admirably adapted the house in Park Street to the reception of his marbles, his time was chiefly occupied in arranging a library, which comprised almost every curious work on the subject of the arts. His books he consulted with equal industry and judgment; and his numerous manuscript observations on the gems particularly of his collection, afforded ample testimony of that fact. He likewise went to great expense in engraving numerous plates of his bas-reliefs, statues, pateræ, &c.

“Though an indefatigable writer, Mr. Townley never printed anything but a Dissertation on an ancient Helmet found at Ribchester, in the ‘*Vetusta Monumenta*’ of the Society of Antiquaries. The reason of this reserve may partly have been a consciousness that his English style was tinged with foreign idioms. Indeed he never spoke his native tongue without some hesitation, and had frequent recourse to French and Italian words to remove his embarrassment.

“In 1791 Mr. Townley was elected a trustee of the British Museum.

“During the two last years of his life, his health was perceptibly, though not rapidly, declining; the occupation which then seemed to interest him most was making designs for a statue-gallery and library to be added to the mansion at Townley. He likewise made calculations of the expense; and enjoined his successors, in his last will, to complete his plan in five years, or the marbles were to be given to the British public, and be preserved in their Museum.

“He died on January 3, 1805, in the 68th year of his age; his will bore date November 9, 1802, and the codicil December 22, 1804. After his decease his executors, upon a mature consideration of all the circumstances, came to the decision of offering the marbles and terracottas only to the nation, and of immediately fulfilling Mr. Townley’s conditional view, with respect to the British Museum. An Act was consequently passed for purchasing them; and the sum voted was 20,000*l.* An additional edifice was built at the Museum for their accommodation, and the collection was opened to the public in the spring of 1808.

“Mr. Townley’s remaining Collection of Antiquities, illustrative of his marbles, was purchased under another Act, in 1814, for the sum of 8200*l.*”

Indian Ink.—The Chinese, or, as it is miscalled, Indian, ink has been erroneously supposed to consist of the secretion of a species of *sepia*, or cuttle-fish. It is, however, all manufactured from lamp-black and gluten, with the addition of a little musk to give it a more agreeable odour. Père Contancin gave the following as a process for making the ink:—A number of lighted wicks are put into a vessel full of oil. Over this is hung a dome or funnel-shaped cover of iron, at such a distance as to receive the smoke. Being well coated with lamp-black, this is brushed off and collected upon paper. It is then well mixed in a mortar with a solution of gum or gluten, and when reduced to the consistence of paste, it is put into little moulds, where it receives those shapes and impressions with which it comes to this country. It is occasionally manufactured in a great variety of forms and sizes, and stamped with ornamental devices, either plain or in gold and various colours.—*The Chinese, by J. F. Davis.*

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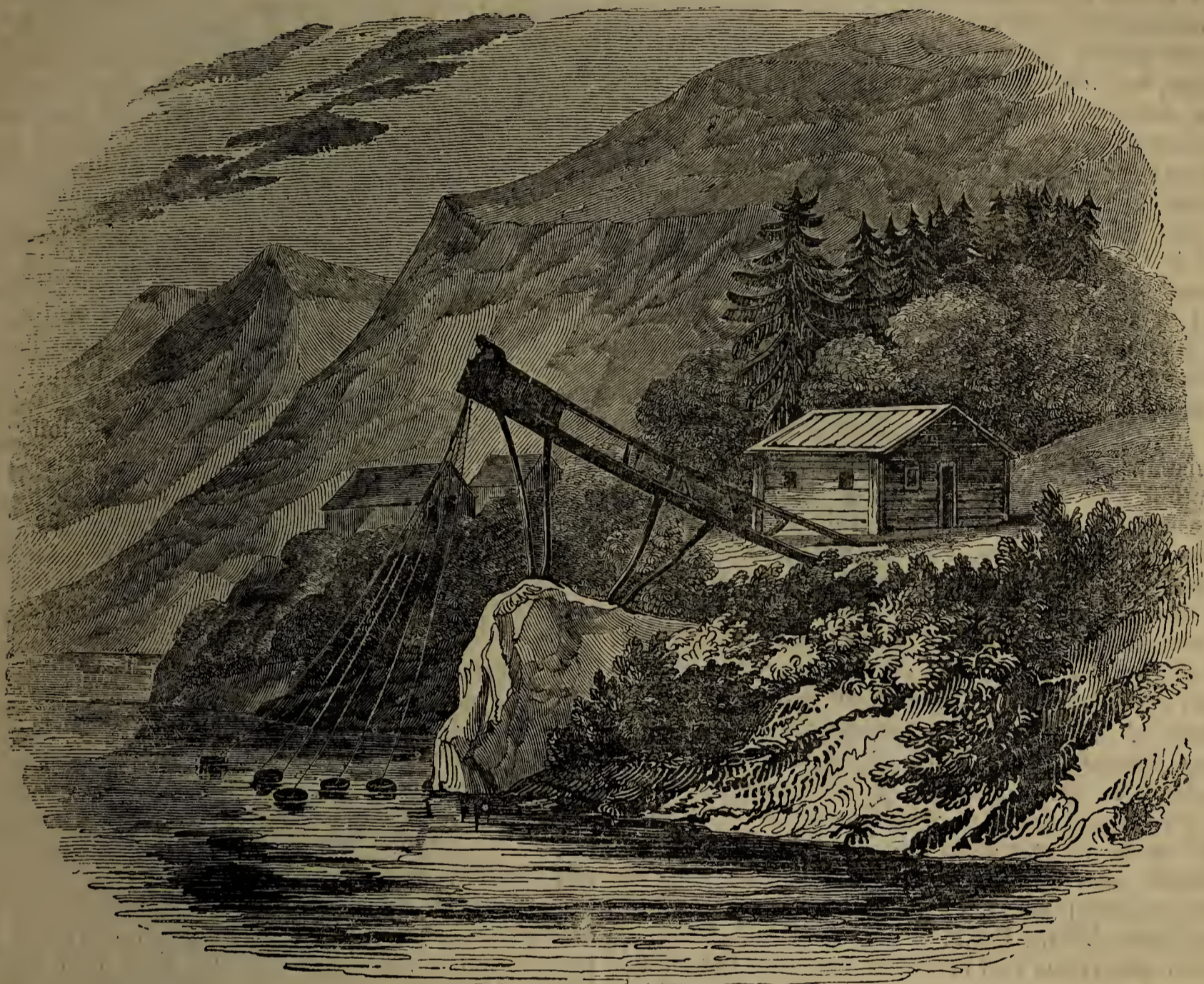
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290.]

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[OCTOBER 8, 1836.]

NORWEGIAN FIORDS.



[Salmon Fishery on Lake Söstrand.]

THE term Fiord, signifying an arm of the sea, corresponds with the Scottish word Frith, or Firth, both terms being probably derived from the same root. The Fiords of Norway, however, in general bear a stronger resemblance to the deep inlets called lochs, in the Highlands of Scotland, than to the Firth of Forth, or Tay, or Clyde. Like the lochs, the fiords penetrate far inland, winding among stupendous mountains, until they entirely lose the character and appearance of an arm of the sea, and assume those of a river, or, at times, those of an inland lake. The whole coast of Norway, from Christiansand to Porsanger-fiord, near the North Cape (an extent of nearly 900 English miles), is cut up by these lochs, presenting, on a much more extensive scale, the same ribbony or rugged aspect as the coast of our Western Highlands, which country Norway resembles in many other respects. As the mean breadth of Norway is only 150 miles, while in the northern provinces the breadth does not exceed 50 miles, the traveller by land continually comes upon these deep inlets, which he must either cross by ferry-boats, or make very long circuits to turn them at or near their heads. During their severe winters, when they are frozen over, the Norwegians cross fiord after fiord on their long skates, and travel straight forward from one point to another.

Though in some respects they impede communication, they greatly favour it in others. Christiania,

Bergen, Drontheim, and all the principal towns of Norway, are built upon fiords, which, for the most part, are navigable in their whole length, and afford commercial access to the heart of the country. The fir-timber, the principal export of the kingdom, after being floated down the rivers from the interior in immense rafts, falls into these arms of the sea, and is embarked for England, Holland, and other countries, at the convenient ports of Christiania, Bergen, &c. Numerous sawing-mills, for cutting the trees into deal planks, occur on the banks of the rivers and the shores of the fiords, and give life and activity in the midst of profound solitudes. Some of the rivers, before reaching the arms of the sea, fall over tremendous rocks, and present some of the grandest cataracts in Europe. This is the case with the Glommen, a few miles above the port of Fredericstadt. A river, about as wide as the Thames at Richmond, gradually contracts, with a more rapid course, till it reaches a deep gorge, formed by lofty rocks, and then leaps headlong into the abyss below. As this fall would be destructive to the timber, ingenious contrivances have been resorted to in order to avoid it, and still send on the staple by a cheap and quick conveyance. The spars are allowed to float down from the forests where they were felled to the very top or edge of the cataract, where they are stopped by means of machinery, and drawn ashore to the sawing-mills close at hand. There they are cut into

planks, and these planks are afterwards slipped into a wooden trough, which runs for seven miles along the bank of the river. The trough is on an inclined plane, and a strong current of water, like a mill-stream, being admitted from above, rapidly carries the planks down to the quays on the fiord, where the ships lie ready to receive them on board.

From these fiords the Norwegians, the oldest whale-fishers in Europe, issued annually on their perilous expeditions. This trade has long been on the decline, and now seems to be almost entirely abandoned; but other fisheries are carried on to a great extent along the shores of the Northern Ocean, and in the fiords themselves, which for the most part swarm with salmon, lobsters, cod, and other fish. Many of the lobsters that appear on our tables are caught by the honest Norwegians in these parts. A recent traveller saw in an account of exports for the three preceding months, which was printed in a Norwegian newspaper, an entry of 48,000 lobsters, which had all been shipped at one place. On asking who were the consumers, he was told, "Why the Londoners, to be sure;" and, on making further inquiries, he learnt there was a regularly-established "English Lobster Company," that had its agents actively employed all along the coast. During the season their packets sailed twice or thrice a week from Chistiansand for England*. In every article of consumption the supplies for this world of a city we live in assume dimensions that are truly gigantic; and never were the remote regions and nooks and corners of the world so thoroughly laid under contribution by wealth, enterprise, and luxury.

The Norwegian salmon, which are large, and of excellent quality, are caught in various ways. One of their methods deserves a description, and seems to be very effective. In descending one of the longest and most picturesque of the fiords (Söstrand-fiord), Mr. Twining's attention was caught by a number of small barrels floating on the surface of the water. "These barrels," he says, "at a short distance from each other, were secured each by a thin rope or cord, and all these cords were joined together at the end of a high scaffold that projected over the fiord: it was a sort of platform, long and narrow, one end of which rested on the bank, while the other, at a slight angle of elevation, was supported by long poles on the edge of a rock that advanced into the water. It was not long before I saw the head and arm of a man, whose body was concealed behind a sort of screen, made of planks, at the end of the platform. Although he did not make the least motion, he appeared very much occupied, and was evidently not perched on that frail observatory for motives of mere curiosity. My boatmen explained the enigma by telling me that he was fishing salmon. A large net is suspended horizontally under the barrels, and the extreme transparency of the water of the fiord permits the fisherman to see all the fish that swim in it. When a shoal of salmon passes over his net, he rapidly draws up in one clue all the cords attached to the different barrels; the barrels thus close together at one point,—the net is shut, and all the fish in it are taken. Although the fiords abound with fish, as do also the mountain-streams that discharge themselves into them, it appears that these men often lie in ambush the best part of a day without taking anything,—but one fortunate capture is an ample reward †."

On the rivers and streams there is a very simple method of taking salmon in large quantities. They either make artificial embankments, or avail themselves of ledges of rocks that divide the stream into several narrow channels. On each of these channels they

* 'Journey through Norway, Lapland, &c., by the Rev. Robert Everest, A.M., F.G.S. London, 1829.

† 'Voyage en Norwège et en Suède,' par Henri Twining.

place two sluices, the one above and the other below, in such a manner that they can be opened and shut at pleasure. The fish, having once entered these locks, are prevented from proceeding or returning, and the water being let off, they are taken by the hand without any trouble. The method is also common in Sweden, where, on the river Deje, they often thus take from 500 to 800 salmon in a single day. The greater part of the salmon caught in the fiords are salted and exported, but many of the fish are sold fresh in the neighbouring country at the rate of about an English penny the pound. Angling seems too slow an operation for the Norwegians; but several English gentlemen, who of late years have been attracted by the romantic beauty of the country and the love of fishing, have found excellent sport in that way, particularly on the fiord where Drontheim is situated, and in the streams leading to it, which abound with salmon, salmon-trout, and other species.

The steep shores of most of the Norwegian fiords are covered with wood to the water's edge. The trees are chiefly pine, fir, and juniper. Many of the fiords are studded with picturesque little islands, which add greatly to their beauty and interest, and nearly all of them have islands lying off their mouths. On approaching by sea, these mouths, or entrances to a long inland navigation, are hardly visible; crossing a sea as black as ink from its extreme depth, the ship steers on to an apparently iron-bound coast, and seems to be making for the breakers; but presently a narrow opening is discovered,—the rocks appear to open and make way for her, and passing between their solid masses the vessel shoots into the fiord, which twists and turns from promontory to promontory, at times approaching and at times receding from a range of lofty blue mountains that closes the distance. "It almost alarmed us," says Mr. Everest, "to find ourselves in a large ship, winding at full sail among lofty rocks, which were so near occasionally, that we fancied we might have leaped on shore. We could at any time have held a conversation with a person there; and in this manner we proceeded for miles." At irregular distances the fiords expand, and form deep gulfs or bays, which penetrate far among the mountains, and look like lakes. At many of these points a small primitive town or romantic little village presents itself, with its sloops lying at anchor, and its white-sailed fishing boats tacking off and on, from cape to cape. The boats on the fiords are, for the most part, of a remarkable form, which is at once picturesque and antique: they rise high at the stern and bow, while at the waist they sink almost to the level of the water.

If, on approaching them by sea, there seems no possible entrance to the fiords,—on descending them, from the interior of the country, there appears to be no issue from them; they are everywhere land-locked by hills covered with forests, or by lofty, bare, and bleak mountains fringed with snow.

They vary considerably, and some of them offer less solitude, with more cultivation and gentler beauties, but for sublimity of scenery the great Söstrand-fiord, particularly in that part of its course between Leirdalsören and Gudvangen, where the narrow and winding valley of Nørdal commences, surpasses them all. Near the village of Leirdalsören, this fiord flows in a deep bed between mountains of an imposing aspect; a little lower down it extends in different directions, and forms a magnificent basin, whose lonely quiet waters are rarely traversed by ship or boat. Still lower down a majestic promontory, covered with a pine forest, and backed by an almost perpendicular mountain, with a glittering crown of snow, divides the fiord into two branches, one of which runs onward to the sea, while the other, and the grander of the two, turns off to

Gudvangen. Here rocks without the slightest trace of vegetation rise perpendicularly to the height of 2000 or 3000 feet, and cataracts after cataracts leap from their summits, or rush through their sides into the fiord below. Some of these falls are remarkable from their vast volume of water, others from their picturesque effect; but gigantic rocks, cascades, and snowy mountains succeed each other with such rapidity, that the eye, anxious to lose none of these glorious objects, hardly knows where to rest. Still proceeding in the direction of Gudvangen, the fiord again separates into two branches; the branch to the right, which leads to the village just named, is still more wild and sublime than in any preceding part of this inland sea; the bare rocks rise to a much greater height, and at their boldest point the great cataract of Savanfossen thunders down their sides, lighting them up with foam and rainbow hues as it falls.

The transparency of the water in these fiords, and in the narrow straits between the main and the innumerable islands which lie off the coasts of Norway and Lapland, gives an extraordinary interest to the voyage. This transparency increases in proportion to the traveller's approach to the North Cape. In speaking of the Folden Fiord, and the straits beyond it, Sir Arthur de Capell Brooke says, "Nothing can be more surprising and beautiful than the singular clearness of the water of these northern seas. As we passed slowly over the surface, the bottom, which here was in general a white sand, was clearly visible, with its minutest objects, where the depth was from twenty to twenty-five fathoms. During the whole course of the tour I made, nothing appeared to me so extraordinary as the inmost recesses of the deep, thus unveiled to the eye. * * * Hanging over the gunwale of the boat, with wonder and delight I gazed on the slowly moving scene below. Where the bottom was sandy, the different kinds of asteriæ, echini, and even the smallest shells, appeared at that great depth conspicuous to the eye; and the water seemed, in some measure to have the effect of a magnifier, by enlarging the objects and bringing them nearer. Now, creeping along, we saw, far beneath, the rugged sides of a mountain rising towards our boat, the base of which was hidden far in the great deep below. Though moving on a level surface, it seemed almost as if we were ascending the height under us; and when we passed over its summit, which rose in appearance to within a few feet of our boat, and came again to the descent, which on this side was suddenly perpendicular, overlooking a watery gulf, as we pushed over the last point of it, it seemed almost as if we had thrown ourselves down a precipice—the illusion from the crystal clearness of the deep actually producing a sudden start. Now we came again to a plain, and passed slowly over the submarine forests and meadows which appeared in the expanse below; inhabited, doubtless, by thousands of animals, to which they afford both food and shelter—animals unknown to man; and I could sometimes observe large fishes, of singular shapes, gliding softly through the watery thickets, unconscious of what was moving above them*."

[To be continued.]

THE ISLE OF WIGHT.

TO THE EDITOR OF THE 'PENNY MAGAZINE.'

SIR, *Blackheath, September 5, 1836.*
The account of the tour round the Isle of Wight, given in the Supplement of last month's 'Penny Magazine,' must have been doubtless interesting to every reader of that useful little miscellany; and all those who have chanced to make that Periplus in miniature, must be ready to vouch for its general accuracy. But there is one point upon which I must certainly beg to take some exception, and that is,

* 'Travels to the North Cape,' &c.

to the derivations attempted chiefly on the authority of Sir Richard Worsley, of some of the names of the chief places of note in that well-known and very singular island. Sir Richard may be very well as an historian, at least I do not pretend to know anything to the contrary; but when he steps out of his way to go hunting for a derivation, he appears to me most signally unfortunate.

I have no wish to make the pages of the 'Penny Magazine' a receptacle for a learned dissertation upon etymology, but as the Isle of Wight is now so universally frequented, and most of the names mentioned in everybody's mouth, it may perhaps be as well to be correct as not in the derivation of them.

It would not, I think, be a very difficult task to show that most, if not all the names of any antiquity in the island are of Saxon or German origin, as the following examples will partly suffice to show.

The word Needles, as I have before attempted to prove, signifies *Undercliff*, and is a corruption of *Nieder fels*, merely by ellipsis of the r and f, in the haste and carelessness of colloquial pronunciation. And this derivation, which I have no hesitation in saying is the correct one, is not only important in an etymological point of view, but also in its physical sense, as it shows that precisely the same process took place formerly with respect to the Needles that is now going on at St. Catherine's Point, namely, that it was, originally, a landslip, then an *Undercliff*, whence the name; and that subsequently it has been washed by the action of the sea into a thousand fantastic shapes, all probably as unlike needles as it is possible to be. Atherfield is Aderfeldt, the field with a vein or streak through it. Chale Bay; the word schale signifies a cup or bowl, also a nut-shell; thus it may mean the bay in the shape of a bowl, or with nut-shells scattered over it; but this I do not attempt to give positively. Next we have Black Gang Chine; nothing can show the Teutonic origin of these words more satisfactorily than the word gang, which is pure German. Black has here no more to do with it than in the name Black-heath, from which I now write. It is a corruption of Bleich (bleak), or rather blank (naked); and gang (way or road). The last word I shall meddle with is Culver, said to be from Culfre, a pigeon; it may be so, but culfre is not the usual word for pigeon, and there appears a much readier local derivation for it. Upon all these eminences in former days, and especially in troublous times, beacons are said to have been lighted. Charcoal was probably used here, and it may have been thence called Kohle feuer Point. Abridged to Kulfer, it is now written Culver, v being merely substituted for f.

I remain, Sir,

Your obedient servant,

A FRIEND TO FACT.

THE BRITISH MUSEUM.—No. IV.

A PLAIN man may walk round the collections in the Gallery of Antiquities, and though admiring the intrinsic beauty of much that it contains, may ask, What is the utility of collecting, and so carefully preserving so many mutilated statues and broken fragments of works of art? Let him not be told with a sneer that he has no taste. It is better he should confess that he does not understand the matter, than that he should unthinkingly admire because he hears other people admiring. Taste in the great body of a people is as much a thing of acquisition as the ability to read or write. It is based on knowledge; and, like knowledge, it may be both acquired and lost. If it were not so, we should not now have to deplore the dilapidated state of many of the finest monuments and works of art in the Gallery—they have suffered more from the hand of man than from time. The Gallery of Antiquities has been formed, as one of its objects, to create and promote the growth of taste; and this also is one of the intentions of such publications as the 'Penny Magazine,' in giving pictorial illustrations of remains of antiquity, and subjects belonging to the fine arts.

Another individual might ask, What is the moral value of these collections? He might object that there is no necessary connexion between a people's happiness

and their possessing a fine and polished taste; and that these works of art but perpetuate the recollection of the human intellect having been laboriously devoted to the service of absurd, fantastic, or grovelling superstitions. But if there is no necessary connexion between taste and happiness, neither is there between taste and vice; and if we can render taste subservient to the improvement of a people's manners without injuring their morals, we make a high advance in civilization. Besides, do we learn nothing from these collections which is valuable? "The religious sentiment which led the Egyptians to bestow so much pains on the preservation of their dead, has been the means of transmitting to the present day nearly all that we know of their skill in the useful and ornamental arts. Their temples and their tombs were, in their origin, perhaps closely connected; and when their temples and palaces had received all the splendour and decoration which Egyptian art could bestow on them, the tombs, which they appropriately called eternal habitations, were not left without a corresponding degree of magnificence and ornament. From the tombs we learn not only what was the mode of disposing of the dead—a subject of the highest interest in every nation, as being one of the outward signs of its social state and its religious character—but here we see also the daily occupations of life, an enduring and almost living picture of one of the oldest states of social existence of which we have any record.*"

These observations, when adapted to circumstances, may be found to answer to any objections which may be urged against the collections in the Gallery of Antiquities. They are, apart from other considerations, valuable as historical documents. They reveal much to us concerning the modes of thought, habits, manners, and customs of generations long since swept away; they tell us what man has *been*, and we may compare it with what man *is*; and from the comparison we may draw, not merely humiliation for our pride, but much that may exalt our nature as rational and intelligent creatures.

On entering the first room of the Gallery of Antiquities, the visiter will remark, over the door which fronts the entrance and leads into the second room, a bust of Charles Townley, a sketch of whose life was given in the previous article on the Museum. The visitors too generally pass through this room quickly, as if it contained nothing particularly worthy of being looked at. This is partly produced by its appearance, as it looks, what it actually is, a mere entrance-hall or vestibule. Yet it is of Mr. Townley's collection of terracottas that M. Quatremère de Quincy says in the 'Encyclopédie Méthodique,' that to have "a just idea of the variety, the elegance, the fine taste, and the great number of subjects which the art of modelling was capable of multiplying in this way [in *terre cuite*, or the art of working in baked earth or clay], we recommend above all the fine collection of Mr. Townley, which, after the death of that celebrated amateur, passed into the British Museum." The following account of the terracottas is given in the first volume of the 'Townley Gallery,' in the 'Library of Entertaining Knowledge.'

"The first room, or vestibule, of the Townley Gallery, is fitted with terracottas, the greater part of which were Mr. Townley's; some of them were collected in Italy by Mr. Townley himself, and others purchased, after his return, of Mr. Nollekens, who had acquired them in Rome at an earlier day; a few of them belonged to the museum of Sir Hans Sloane, and are believed to have come from the collection of the Cardinal Gualtieri.

"The figures in this room, with one exception, were found about the year 1765, in a well which was com-

* 'Egyptian Antiquities,' vol. ii., p. 96, 'Library of Entertaining Knowledge.'

pletely dry, near the Porta Latina, at Rome. A labourer, in digging red gravel, called *pozzolana*, with which the Italians harden their mortar, broke into the well and discovered a heap of fragments of terracotta. These fragments were purchased by Mr. Nollekens, who carefully joined the pieces together, and succeeded in restoring the figures nearly to their original state.

"These bas-reliefs were cast in moulds; they were afterwards baked, and occasionally retouched by a graver. They were made use of by the ancients as decorations for their temples, tombs and other buildings. They evidently formed the friezes; and the manner in which they were fastened to the walls by metal nails is occasionally perceptible. The bas-relief No. 9, as well as many others, have the holes filled up; but the Numbers 44, 47, 52, 54, 58, 69, have the holes still unfilled. Of the designs, some appear to be Roman, particularly Numbers 35, 36, 42; but the greater part of them are probably copies from the works of Greek artists. What favourites many of the subjects were, may be gathered from the repetitions.

"Most collections of antiquities contain a considerable number of statues, bas-reliefs, lamps, tiles, vases, and architectural ornaments in terracotta; but the collection of the British Museum, as far as terracotta bas-reliefs are concerned, is probably the most valuable in Europe. The Museum at Naples, in one point, excels the Townley collection; it has a few statues of this material as large as life. They were discovered in the ruins of Herculaneum.

"According to Pliny, Dibutades passed, in his time, for the inventor of the plastic art. 'Dibutades, a Sicyonian potter,' he says, 'first invented the art of making likenesses of clay, in Corinth, by the help of his daughter, who, being in love with a youth who was going on a journey, scored lines round the shadow of his face by lamp-light on a wall, which, her father impressing with clay, made a type or cast from, and placed it with the rest of his pottery to be hardened in the fire. This type, according to tradition, was preserved in the Nymphæum till Mummius overthrew Corinth.

"Such an account of the origin of the art of modelling may be poetical, but it is not probable. The potter's clay must have been one of the most obvious materials for imitative art, and there can be little doubt that attempts were made to model it into the human shape in the earliest ages. Pliny, in another part of his work, describes Rhœcus and Theodorus as originating the plastic art in Samos. The discovery, however, is not to be ascribed to the artists of this or that country or people; it must have been obvious and common to all. Praxiteles was accustomed to say that the plastic art was the parent of sculpture.

"Baked clay was one of the materials which the Egyptians used in forming those small figures which have the appearance of household gods. The Count de Caylus has engraved a fragment of a larger figure, a Head of Isis, in the same material.

"Pausanias, in his 'Attica,' chap. ii., mentions a cella at Athens, containing many statues of clay, which were a representation of Amphietyon receiving Dionysus and the other gods at an entertainment. In the chapter immediately following he describes the roof of the royal stoa in the Ceramicus, as adorned with earthen statues; particularly of Theseus hurling Sciron into the sea, and of Day (*ἡμέρα*) seizing Cephalus. In his 'Achaica,' chap. xxii., he says, 'in Tritæ there is a temple called that of the greatest Gods, the statues in which are made of clay.' In his later 'Eliacs,' chap. iv., Pausanias mentions Pythagoras, of Rhegium, as eminent in the plastic art.

"Paciandi, in his 'Monumenta Peloponnesia,' tom. ii., p. 43, from an expression of Dicæarchus, tells us that

the Athenians made an annual public exhibition of their best works of art in clay.

“The Etruscans were universally known for their works in the same material. Pliny speaks of ‘*Signa Tuscanica per terras dispersa.*’ The works of the Etruscans, it is probable, served as models to the Romans. The elder Tarquin, it is said, employed Etruscan sculptors in the decoration of the Capitol.

“The Bas-reliefs which form the subject of the present division of our work, as we have seen in a passage referred to in Pliny, were called *Typi*; and the same word is used for them by Cicero, in one of his letters to Atticus, in which he says, ‘I commission you, besides, to procure some reliefs, which may be introduced into the plaster of the ante-room; and two figured puteals (coverings for wells).’

“*Typi* was the ancient name. *Terracotta* is a word of very recent adoption, and, with the exception of the ‘*Vocabulario degli Academici della Crusca,*’ will probably be found in no European dictionary. It is thus explained, ‘*Terracotta—quella che è cotta nella fornace*.*’”

We may now take a brief general view of the Gallery of Antiquities, returning afterwards to consider the objects more in detail.

The second, third, and fourth rooms contain a collection of Greek and Roman sculptures. Of these, a female statue, termed *Venus* or *Dione*, which was pronounced by Canova, in 1814, to be the finest female statue he had seen in England—an ancient colossal *Head of Hercules*—a Bas-relief representing the *Apotheosis, or Deification of Homer*—the group of the *Astragalizontes* are among the more remarkable; but some of the ornamental objects are also very fine. The Bas-relief, according to the ‘*Synopsis,*’ represents “the father of poetry seated on a throne at the foot of *Mount Parnassus*, the residence of the *Muses*. Before the poet is a group of figures offering up sacrifices to him. Above are *Apollo* and the nine *Muses*; and on the summit of the mountain is *Jupiter*, who appears to be giving his sanction to the divine honours which are paid to *Homer*. This highly interesting Bas-relief was found about the middle of the 17th century at *Frattochi*, the ancient *Bovillæ*, in the *Appian road*, ten miles from *Rome*. It was for many years in the *Colonna Palace* at *Rome*, and was purchased for the *British Museum* in 1819.” The *Astragalizontes* is a copy in marble of the celebrated group ascribed to the sculptor *Polycletus* of *Sicyon*, which was executed in bronze. Pliny says no work was judged to be more perfect than this group in bronze. The copy in the *Museum*, which was the first marble of which *Mr. Townley* became the possessor, is imperfect; the group represents two boys who have quarrelled while playing at the game of *tali*, but only one of the figures is preserved. Of the other figure there remains a portion of the arm, broken off at the elbow, which holds in its fist one of the bones called *tali*. This arm the existing figure is grasping and biting in apparent rage and vexation. A small portion of one of the feet of the lost figure is also preserved.

The two wood-cuts which accompany this article are taken from the illustrations of the ‘*Townley Gallery,*’ in the ‘*Library of Entertaining Knowledge.*’ The first is a terracotta, representing the *Goddess Hygeia*, or *Salus*, seated, feeding a crested serpent. The remains of a hand to the right of the tree indicate that another figure originally formed a part of the composition. The dimensions of this Bas-relief are eleven and a half inches by one foot five and a half inches. It is numbered 52 in the first room. The second figure is in the third room, No. 28; it represents a nymph seated on the ground, resting on her left hand; the bow indicates that she belonged to the train of *Diana*,

* ‘*Library of Entertaining Knowledge—Townley Gallery.*’

and is supposed to be resting after the fatigues of the chase.



[Room I.—No. 52.]



[Room III.—No. 28.]

The fifth room contains Roman sepulchral antiquities. Opposite to this is a temporary building, containing a collection of casts, chiefly architectural, which belonged to the late *Sir Thomas Lawrence*. They were bequeathed by him, on payment of a sum below their real value, to the *Royal Academy*, by whom they were presented to the *British Museum*. Passing through the sixth and seventh rooms, which contain Greek and Roman sculptures, and the eighth room, which contains Egyptian antiquities, the visiter may ascend the stairs, to visit the ninth and tenth rooms. In the ninth room is the celebrated *Barberini, or Portland Vase* (see ‘*Penny Magazine,*’ vol. i. No. 31). The visiter, on descending, passes through the eleventh and twelfth rooms, and arrives in “the grand central saloon.” Here is a statue of *Venus*, preparing for the bath, which is of white marble; it was presented by the present king, *William IV.* There is also a statue of the emperor *Hadrian*, in a military dress; the breastplate is in high preservation, and richly ornamented. There are also several mutilated statues in this saloon, *Persepolitan* sculptures, and *Arabic* inscriptions. In front of this saloon is the *Egyptian saloon*, at the entrance of which, on each side, are the two bronze lions which were brought, in 1832, from *Jebel Barkal*, by *Lord Prudhoe*,—and to the left the *Phigalian saloon*, through which the visiter passes into the *Elgin saloon*.

"The stranger who visits the Gallery of Sculpture in the British Museum cannot fail to be struck with the curious collection of objects in the room of the Egyptian antiquities. Passing from the contemplation of the almost faultless representations of the human form in marble,—the triumph of Grecian art,—he comes to figures more remarkable, at first sight, from their singular forms and colossal size than for their beauty. Though the contrast between what he has just left and the scene to which he is introduced creates at first no pleasing impression, feelings of curiosity and admiration soon arise from a more careful examination of what is around him. The colossal dimensions in which some figures are exhibited, the hardness of the materials employed, and the strange combinations of the human and the animal form,—all unite in exciting an intense desire to know in what country and in what age of the world such marvellous specimens of human art were produced. When he is told that these are but a few samples of the wonderful works that still exist in Egypt; that other European capitals—Rome, Turin, Paris, and Berlin—have their galleries enriched from the same source, or their public places ornamented by them; that the ancient tombs and temples of that country still furnish inexhaustible materials to enrich our museums, and gratify the curiosity of the antiquary,—he will at once perceive that a mere knowledge of the names assigned to these pieces of stone would convey no information at all, and that any description of them must be unintelligible, if it does not connect them with the country from which they come, and the monuments of which they are but a part*."

RED AND GREY FOXES, AND A PECULIAR METHOD OF TRAPPING THEM.

[From a Correspondent.]

ALTHOUGH both red and grey foxes are found in most parts of North America, yet, from causes unknown to the inhabitants of those countries, it is universally remarked, that *red* foxes multiply and become far more numerous than *grey* ones. It is, however, quite obvious that this circumstance is not owing to any kindness or partiality manifested towards the red ones; for it is a fact well known to the hunters of the backwoods, that "the store-keeper" will give double the sum for the skin of a red fox that he will do for that of a grey one. Moreover, red foxes are much greater pests to the barn-yard and hen-roost than the grey ones are, for the latter are naturally retired and shy, seldom rambling far from their haunts in the lonely wilderness,—subsisting almost entirely upon what the forest affords them.

Fox-hunting, which is so ardently pursued among ourselves, is scarcely attempted in North America. This does not proceed from any scarcity of foxes, certainly,—for there are plenty of them everywhere,—but from a want of *taste* and *time* in a people as yet almost exclusively merchants and traders,—husbandmen and mechanics. Besides, in a country where so much of the primeval forests still remain, even in the early-settled districts, it would be next to impossible to follow a pack of hounds with the remotest chance of being "in at the death."

Though the foxes of America find no aristocratic patrons amongst the citizens of that country, nor farmers restrained from destroying them by their wealthy sporting landlords, yet do they "increase and multiply," notwithstanding the prevailing enmity existing towards them. The farmers, as elsewhere, are the principal sufferers by the depredations of the fox; for as he has an ungovernable appetite for such dainties as lamb, turkey, goose, and chicken, he is in the almost

* 'Library of Entertaining Knowledge—Egyptian Antiquities,' vol. i., p. 4.

daily—or rather nightly—habit of paying his respects to the barn and poultry-yards. The farmers, however, have a method of trapping them which I have not seen practised elsewhere; and as I can testify to its general success, I will explain the way in which it is managed. In the first place, the farmer endeavours to ascertain through which of his enclosures the fox passes on his way from his cover in the woods to the farm or poultry-yard, which, in most cases, is easily determined. Having established this point to his own satisfaction, he then takes his plough and turns up two furrows across the field diagonally,—from corner to corner,—intersecting each other in the centre of the enclosure. At this point of intersection he then places a spring-trap or two, covering them slightly with portions of the finer soil, but making as little disturbance about the place as possible. It appears that foxes have a partiality for travelling in tracks of this sort, or more probably along the sides of them, without being at the trouble of stepping over; but finding, on arriving at the point of intersection, that they must either cross the furrow, or pursue a route which leads in a contrary direction to the place they wish to arrive at,—make up their minds to pass the ditch, and, in the attempt, probably get caught in the traps. Some persons strew pieces of cheese in the vicinity of the traps, but I have generally found that any bait of this description did more harm than good,—probably being the means of awakening suspicion in the sly creature, thereby rendering him more cautious and circumspect than he otherwise would have been.

How these animals contrive to subsist through the long and severe winters is somewhat difficult to imagine; for where the country is but thinly peopled they have few opportunities of committing depredations; and what chance throws in their way in the wilderness must be necessarily very limited, since, at that inclement season, but few of the feathered tribes remain in the woods, and from the northerly and mountainous regions the whole of the birds that had enlivened them during the summer (with two or three unimportant exceptions) retreat to more southerly and congenial climes on the first approaches of winter. And yet, during the depth of winter the foxes do not make their wonted visits to the hen-roosts; for farms which were nightly prowled over by them during the summer months are scarcely ever visited by them during the long winters;—which circumstance is easily ascertained from the ground being covered with snow, so that the foot-prints of the fox would be easily detected did he venture into the precincts of the farm-yard at that season. Notwithstanding the apparent difficulty of accounting for their subsistence, foxes are, however, found in the solitudes of the wilderness, far beyond the remotest settlements.

Walls End Coals.—Walls End is a village (taking its name from being at the end of the old Roman Wall) situated in the county of Northumberland, three miles east of Newcastle-upon-Tyne. Near it is a colliery which was opened by the enterprising William Russell, Esq., (grandfather to the present possessor of Brancepeth Castle, in the county of Durham) and which has for half a century been wrought by the family. The coals sent from this colliery were at one time of the very best kind, and thirty years ago could be sold for almost any reasonable price the dealer chose to ask for them. Other coal-dealers found out the secret, and appended to the names of their coals likewise the favourite name of "Walls End," no matter from whence they came, so that at the present time coal of every quality shipped on the Tyne, Wear, and Tees, bears that name, although strictly still only one colliery, from its situation, (as above described) can really be properly called Walls End. The great loss arising to lessees of coal-mines, from having to pay heavy damages for land covered with such heaps and spoiled crops, besides rent for coals thus consumed, expense of digging from the mine, carriage in many cases a couple of miles underground, expense of machinery

to raise the same to the surface, with a host of *et ceteras*, has caused them and others to take the subject into serious consideration, and to endeavour to devise some means by which such unnecessary waste might be prevented. Accordingly, in the year 1829, the subject was brought before the legislature, and a volume of evidence, replete with information on every point connected with coals and coal-mining operations, was laid before the public. Almost every witness that was examined gave it as his unhesitating opinion that the extensive waste (as described) would be entirely done away with if an Act of Parliament was passed compelling the dealers of coals to sell them by weight instead of measure, as this would do away with every inducement every one had whose hands they passed through of getting large coals for the purpose of breaking them and increasing the measure; and that these small coals would go with the other, and still would be delivered into the cellar of the consumer as good and as large as before. The Act of Parliament for the regulation of Weights and Measures at length provided for this, but so far from this alteration having been found of so much benefit as was predicted, it unfortunately happens that since that period there has been a greater demand for large coals than ever was before; instead of small coal heaps being done away with, they are increasing on every side, and the nuisance, instead of being on the wane, is becoming almost intolerable.—*From a Correspondent.* [It is difficult to remedy this state of things if the consumer will have large coal. In ordinary cases an inferior article may be got rid of by selling it at a reduced price; but small coal, from the present construction of fire-grates, is certainly not adapted for domestic purposes, and would probably not sell, however the price might be reduced. It cannot of course be sold for less than the freight and port charges, which are large, and therefore the only thing which the coal-owner can actually do is to burn it.]

WINCHELSEA, SUSSEX.

THE ancient towns of Winchelsea and Rye, which are about three miles apart, are linked together in the nature of their jurisdictions, privileges, history and fortunes. "The Cinque Ports," says the 'Municipal Corporations Report,' "have existed as an association from a very early period of English history. The oldest charter which they now possess is one of Edward I., and this refers to their privileges in the time of Edward the Confessor and William I., granted by charters, which the charter of Edward I. states that king had seen." These five ports are Hastings, Romney, Hithe, Dover, and Sandwich; to these were added in very early times the towns of Winchelsea and Rye, to which all the privileges of the Cinque Ports were given. Attached to these ports are a number of others, thirty in all, termed limbs or members, or subordinate ports. Thus Margate is a limb of Dover, Ramsgate of Sandwich, Tenterden of Rye, &c. Winchelsea has no subordinate port. Until the time of Henry VII. the crown appears to have had no permanent navy. The Cinque Ports, until then, had always furnished nearly the whole of the shipping required for the purposes of the state, and their assistance to the king's ships continued long after that time. When ships were wanted, the king issued his summons to the ports to provide their quota. The number which they were bound to provide, in the reign of Edward I., was fifty-seven, fully equipped, and at their own cost; the period of service, however, was limited to fifteen days*.

So early as the reign of Edward I., the sea—which from time immemorial has been effecting changes on the whole extent of the coast of Sussex—seriously interfered with the prosperity of Winchelsea and Rye. At that time the old town of Winchelsea was covered by the water, and the navigation up to Rye was impeded by the sand. Edward I., who was unquestionably one of the most vigorous-minded kings that ever sat on the throne of England, and whose stern, and not very just,

* 'Municipal Corp. Report'—Report on the Cinque Ports.

yet far-seeing policy, aimed at the consolidation of the entire island of Britain into one kingdom, paid great attention to the Cinque Ports. He granted a new site for the town of Winchelsea, which he caused to be surrounded with walls; and in his time also a new channel was made for the navigation of the Rother up to Rye, to which sea-slucices were constructed. But all efforts to sustain the two ports were rendered unavailing. The sluices prevented the proper flow of the tide up the river, by which its bed had been regularly scoured by the ebb, so that the channel became choked up; and the formation of the marshes by the retirement of the sea, proved nearly as destructive to the new town of Winchelsea as the inundation had done to the old. In the reign of Edward VI. there was an act passed at the instance of the inhabitants of Rye and Winchelsea, the substance of which will give an idea of the then state of the two towns. The statements respecting the former condition of the harbour may be regarded as coloured with some exaggeration by the hopes and wishes of the applicants. 2nd and 3rd Edward VI., c. 30.—"An acte for the townes of Rye and Wynchellsey, and for casting of balaste into the Camber. Forasmuche as the inhabitauntes of the townes and portes of Rye and Wynchelsey, in the county of Sussex, have trulye enformed the king's mooste honourable counsell that the harbour and rode called the Camber, beinge nere to the sayde townes of Rye and Wynchelsey (lyinge over againste the costes off Dyepe in Fraunce), in tymes past hath bene a harboroughe able to receyve twoo hundredth or fower hundredth saylle of shippes, as welle in tymes of warre as in tymes of peace, and beinge there, myghte not oonly yssue owte thereof at all tymes to encounter their enemyes, but also in tymes of stormye wyndes might had rescue and good harborowe in the same, to the great salvegarde of the king's shippes, and of marchauntes passing to and fro uppon the narrowe seas," &c. The act then goes on to declare that the harbour and road is choked up, "that there cannot lye in the same harborowe above thirtie or fowrtie saylle of shippes, and yet the same shippes cannot come into the same harborowe withowte greate daunger." The cause of this is stated to be, "partelye by occasyon of castinge of ballest into the same harborowe and creekes, and partelye because dyvers mershes inned [inclosed] take in no water to scower the channell." It then enacts that mayors and jurats shall appoint places for unlading ballast from ships, and inflicts a penalty of forty shillings per ton for transgression of the law.

But the prosperity of the two ports was irrecoverable. For more than three centuries they have been in a state of slow decay, until Winchelsea has dwindled into an insignificant village. Rye has retained its privilege of being a parliamentary and municipal borough, and has still something of the appearance of a port. In the 'Boundary Report' it is stated, that "Rye stands on the edge of the extensive tract of marsh land which runs along the coast as far as Hithe. The river Rother, and other streams which drain this marsh, empty themselves at Rye into the sea, and contribute to the formation of the harbour. The present approach for vessels is by the lighthouses; the mouth of the channel, nearer Winchelsea, which was projected as an improvement, and still retains the name of the New Harbour, has been for many years entirely choked up with sand. . . . New Winchelsea, as it is called, stands on a hill two miles from Rye, and separated from it by the low land, through which flows one of the streams alluded to as forming the harbour. The site of this town is in the parish of Icklesham, from which it was purchased when the old town, at a remote period, was drowned by an irruption of the sea. A small portion only of the parish of old Winchelsea is above water. This adjoins the mouth of Rye Harbour."

Winchelsea, in its three capacities of a parliamentary and municipal borough and Cinque Port, is extinct. It lost its privilege of returning two members to Parliament by the Reform Act, being disfranchised by that measure; and the municipal corporation, which had been kept up for the sole purpose of returning the members for the borough, has terminated by the neglect of the usual forms of election of municipal officers. This was in 1833. There is a report on Winchelsea in the 'Municipal Corporations Report;' but the town is not in the list of reformed municipal corporations appended to the act. It has no trade or commerce whatever. The population in 1801 was 627; in 1811, 652; in 1821, 817; but in 1831 it had fallen to 772. The total number of houses worth 10*l.* was only 34. In 1835 it had one daily school, and a Sunday school, to which a lending library is attached, which was established by the rector, and is supported by him.

The wood-cut represents a gateway, a remnant of the walls of Winchelsea, built by Edward I. It is stated that the town once covered a surface of two miles in circuit. This, however, is doubtful, and may refer

to the proposed plan of the new town, as projected by Edward, but which was probably never filled up. The only remains of the ancient church are the chancel, now used for divine service, and three aisles, which contain two monuments, with effigies of knights templars.

Winchelsea is nearly ten miles from Battle, where the decisive engagement was fought which gave the crown of England to William the Conqueror, and led to a complete revolution in the laws, language, and habits of the English people. William landed in Pevensey Bay, which is a portion of the curved line of coast inclosed between the projections of Dungeness and Beachy Head. Nearly nine miles east from Winchelsea, in a straight line, is the singularly-situated town, or rather now, village, of Lydd; it is a limb or member of the Cinque Port of New Romney, and was formerly a sea-port on the barren promontory of Dunge Ness. It is now a mile inland, in consequence of the accumulation of shingle; behind it is the great Romney Marsh and before it the sea; it appears as if cut off from all communication with the rest of the country, and its general aspect is "in the last degree desolate."



[The Strand Gate, Winchelsea.]

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THE EXCHANGE, PARIS.



[La Bourse.]

PARIS is not, like London, a vast entrepôt for the commerce of the world. Its inland position precludes this, but the mere daily consumption of a large metropolis occasions every day extensive transactions in home, foreign, and colonial productions. A concentrated population, exceeding 800,000, an immense number of whom are industriously engaged in manufactures of various kinds which are in demand all over the globe, stimulates commercial activity, and enlarges the scale of traffic. The expenses of the state amount to upwards of 45,000,000*l.* per annum; and receipts to the same amount are continually in the course of payment into the coffers of the public treasury. The national debt exceeds 300,000,000*l.*; so that Paris is the centre of great financial operations, and in this respect is second only to London. The only place authorized by the government for the general meeting of capitalists and merchants for the transaction of business is the Bourse. The funded system is the growth of modern times, and there are few buildings appropriated to this purpose which were erected before the seventeenth century. The Exchange at Amsterdam was begun in 1608; and the Royal Exchange of London was built at the expense of Sir Thomas Gresham, after the Great Fire of 1666. They are to the large commercial transactions of the present day that which the market-cross was at an earlier period.

At the time when the Mississippi scheme of Law gave

rise, in France, to the most extraordinary mania which the thirst of riches ever occasioned, the transactions took place in the open air, in the Rue Quincampoix, a street chiefly occupied by bankers and money-dealers. A royal road to wealth appeared to have been attained, but it led only to the most disastrous public and private calamities. In 1724 the exchange of Paris was first established in the Hôtel Mazarin. It was not until the Emperor Napoleon directed his attention to the embellishment of the capital that it was resolved to erect a building to be specially devoted to the meetings of persons engaged in transactions relating to the public securities and to commerce. The first stone of the present edifice was laid March 24th, 1808; but it was eighteen years before it was completed, the work having been suspended in consequence of political events. The form of the Bourse is a parallelogram, that is, having a square form, the sides of which are longer than the ends. The fronts of the Bourse are 164 feet in breadth, and the length of the sides is 256 feet; and it is surrounded by sixty-four Corinthian columns. Each front is supported by fourteen columns, and each side by twenty,—reckoning the pillars at the angles twice over. They are elevated on a basement of about 8 feet in height, and in height are 32 feet. The colonnades are accessible to the public during the hours of business. The elevation terminates by a simple entablature. The roof is made of copper and iron. It is

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confessed that the Bourse has scarcely the air of an edifice devoted to commerce. It was erected during the most prosperous days of the empire; and the intention of the architect was to give to his design an imposing grandeur, and to produce a general effect, rather than to excite an appropriate idea of the objects of the building. The convenience of the apartments for the use of the commercial authorities has perhaps been slightly sacrificed; but undoubtedly the Bourse is one of the finest structures of which Paris can boast.

The hall in which the business in the funds is transacted is 104 feet in length, and 59 feet broad, and will hold 2000 persons. The floor is paved with marble; and at the upper end is a space, surrounded by a circular railing, termed the *parquet*, which is the place where the *agens de change*, or stock-brokers, assemble, who alone have the power of negotiating the public securities. An arcade on each side of the hall is used as a "walk" by merchants and ship-owners. A gallery of 10 feet wide extends round the hall, and a staircase on the left in the vestibule leads to it. From this gallery there is an excellent view of the proceedings of the speculators below. The rooms at the sides and at the lower end are appropriated to the Tribunal de Commerce, and other authorised commercial bodies. The interior of the hall, the roof of which slopes towards a skylight, is embellished with sixteen admirable imitations of marble bas-reliefs, five being on each side and three at each end. The subjects are as follow:—the Genius of French Commerce accepting tribute from the four quarters of the globe; Europe; Asia; the town of Nantes; that of Rouen: these are on the north side. In front of the public entrance is a representation of the King of France presenting the New Exchange to the city of Paris; the town of Lille; and the town of Bordeaux. On the right side: the union of Commerce and the Arts contributing to the prosperity of the State; Africa; America; Lyons; Bayonne. Above the entrance:—the City of Paris receiving from the Genius of the Seine and the Genius of the Ourcq the fruits of Abundance; Strasbourg and Marseilles. Between the arcades are inscribed, in letters of bronze, the names of all the first commercial cities in the world.

At the London Stock Exchange no person is allowed to transact business but those who are balloted for annually by the committee; and the business is confined entirely to the purchase and sale of stock and other securities, the Royal Exchange being devoted to transactions which are of a more strictly commercial nature. But the Bourse is both a stock and a commercial exchange. The business in the former commences at one o'clock and terminates at four. The *parquet* is then forsaken by the *agens de change*, and the merchants and ship-owners transact business until five o'clock. Bordeaux, Lyons, and some other places have their Bourses, which differ from our provincial exchanges, as the Minister of Finance, in 1819, authorized supplementary grand books of the state; and the *agens de change* in those places are enabled to effect negotiations in the public funds without recurring to the capital. The inscriptions in these supplementary books are inspected by the prefect of the department, and signed by the departmental receiver-general. The transactions which have arisen out of this arrangement are on a small scale.

The authorized brokers (*agens de change*) receive their appointment from the king, and are sixty in number. They are obliged to provide heavy security. No transactions in the funds or in bills of exchange can be negotiated but by the members of this body. Another public body, connected with the Bourse, is composed of the *courtiers de commerce*, whose number is also limited to sixty. They certify the price of gold and silver, establish the rates of insurance and freights, and are

alone admitted in the courts of law as arbitrators in disputes of a commercial nature. The Tribunal de Commerce comprises the principal merchants of the capital, who are nominated by a general assembly of the mercantile body. It is composed of eight judges, fifteen deputy judges, and has its subordinate officers; among whom are ten called *gardes du commerce*, who execute the judicial orders of the tribunal. The Tribunal de Commerce is the Court of Bankruptcy.

A year or two ago it was attempted to exclude females from the Bourse. The women of France are accustomed to take an active part in business, a practice which is in accordance with the habits and feelings of the French. They were active amongst the speculators at the Bourse, and, driven from its precincts, they carried on their operations in one of the adjoining houses, and the fluctuations in French and foreign stock were conveyed to them by messengers. The exclusion was not long kept in force.

During the revolution of the last century one of the churches was converted into an exchange. The present Bourse is in the centre of the gayest part of Paris, only a short distance from the Boulevards, and not far from the Palais Royal, by the rue Vivienne. Immediately facing this building dedicated to business is the Théâtre des Nouveautés. Our Royal Exchange stands far apart from any place of amusement, and is in the centre of a large quarter devoted to the pursuit of wealth. We are perhaps too serious, or have too little flexibility of character, to pass speedily from grave to gay. In Paris the commercial speculator and the man of pleasure jostle each other continually. The three last articles of information in every daily paper in Paris consist of an account of the drawings of the state lottery; the operations on the Bourse; and the list of plays to be performed at the different theatres. Our newspapers terminate their daily sheet by an account of the period of high and low water at London Bridge. These trifling indications have a graver import than might be supposed at first sight.

NOTE.—*Arc de Triomphe*.—The cost of erecting this monument has been 386,000*l.*, and not, as it was made to appear, by the omission of a cipher, one-tenth only of this sum. Westminster Bridge only cost 3000*l.* more than the Triumphal Arch at Paris, and the estimates for building the two New Houses of Parliament will not, it is stated, exceed more than double this sum, or 772,000*l.*

THE "DREADNOUGHT."

ONE of the most interesting objects on the river Thames is the Dreadnought hospital-ship. It was formerly a 104-gun ship; but its huge hull is now converted into an hospital for the reception of sick seamen of all nations. It lies moored off Greenwich. Here sick seamen, no matter what tongue they speak, or what country may have given them birth, are received on board, without the necessity of any recommendatory letters;—it is enough, on presenting themselves alongside, that they are seamen, and that their condition claims the sympathies of humanity.

The Seamen's Hospital owes its origin to a committee appointed to manage a fund subscribed, in the winter of 1817-18, for the temporary relief of distressed seamen, who were at that time to be found in great numbers in the streets of the metropolis. It having been ascertained that there are annually many hundred seamen in the Port of London destitute of medical or surgical aid, it was determined to attempt to establish a permanent hospital for their relief; and at a public meeting, held on the 8th of March, 1821, at the City of London Tavern, it was resolved that a floating-hospital should be established on the Thames, for the use of sick and diseased seamen only, to be supported by voluntary contributions. The hospital was first commenced on board the *Grampus*, a fifty-gun ship; but

the managing committee, finding, in 1830, that this vessel was not large enough, procured its exchange from the Government for the Dreadnought, which was fitted up in 1831 for its present uses.

The situation of this floating-hospital, off Greenwich, has been selected as the most eligible that could be found, contiguous to the bulk of the shipping in the docks and river. The establishment maintained on board is similar to that of other hospitals;—a superintendent, surgeon, assistant-surgeon, apothecary, visiting physicians, chaplain, &c. &c. The public are not only invited to visit it, but are earnestly entreated by its managers to do so.

The total number of patients received on board, since the establishment of the hospital in 1821 to the beginning of the year 1836, is 25,381. Of these 14,768 have been Englishmen, 3087 Scotchmen, and 2665 Irishmen. As it may be interesting to see the different proportions in the numbers of foreign seamen, the remainder of the classified list is given, as follows:—Frenchmen, 111; Germans, 364; Russians, 251; Prussians, 495; Dutchmen, 90; Danes, 383; Swedes and Norwegians, 745; Italians, 192; Portuguese, 232; Spaniards, 92; East Indians, 210; West Indians, 466; British Americans, 299; United States, 473; South Americans, 62; Africans, 149; Turks, 7; Greeks, 15; New Zealanders, 21; South Sea Islanders, 109; New South Wales, 9; Chinese, 20; born at sea, 66. Of the entire number, 1816 were employed in His Majesty's navy, 1769 in the East India Company's service, and 21,796 in merchant-vessels of all nations.

It is pleasing to witness the attention which, in more recent times, has been paid to the condition of seamen. One would naturally, at least at first sight, fancy that the life which sailors lead would render them in habits and manners quite the reverse of what they proverbially are. Exposed to the ever-varying changes of wind and sea, one day stretching across the ocean in apparent perfect security and comfort, and the next, perhaps, caught and tossed in the arms of a tempest, or scattered helpless on a bleak shore, we might expect that, in addition to being brave, they would be thoughtful and forecasting, provident of their means, and ever on the watch to provide for contingencies. Yet who does not know that the sailor on shore is one of the most rash, inconsiderate, and foolishly-generous fellows that ever scattered money about? But, in addition to their thoughtless improvidence, which can be easily traced to those reactive tendencies in human nature which in different situations often impel the same individual into the most opposite courses, they are exposed necessarily to vicissitudes against which no prudence can guard, and which render them, in distress, peculiarly worthy of the attention and kindness of a commercial nation.

The sailors, however, were not without provision being made for them at an early period in our naval history. The brave Sir John Hawkins founded an hospital at Chatham, in which a few individuals are still sheltered; and he, along with some others of our naval heroes who signalized themselves in the defeat and dispersion of the Armada, founded the famous "Chest at Chatham," the origin of the Greenwich fund. The "Chest at Chatham" was a voluntary contribution (which, however, either was soon made or became compulsory) from the wages of seamen for the support of their sick and maimed brethren. It was placed under the management of commissioners, but for many years it was a sad job. Pepys, in his 'Diary,' records various particulars of his going down to Chatham to inquire into the management of the Chest, which was then (in the time of Charles II.) in the hands of a certain knavish commissioner, who proved himself, when the Dutch, in 1667, attacked Chatham, one of the greatest cowards of the place. The Chest at

Chatham was removed, by the 43rd George III., c. 119, to Greenwich; but the monthly contribution to it from the wages of merchant-seamen continued till about two years ago, when it was abolished by act of parliament.

The Dreadnought Hospital Ship is, notwithstanding, a great recent improvement on the mode of providing for seamen in distress. There are several excellent features in its management; its indiscriminate and instantaneous reception of sick seamen; its allowing the convalescent to remain on board until their health is completely re-established, and they can look about for employment; and frequently, when medical assistance can be of no longer avail, sending the patient home provided with every comfort for the journey.

A very noble bequest has been recently made to this charity, by the late John Lydekker, Esq., South Sea ship-owner, who died in 1832, and to whose memory a suitable monument has been erected in the north staircase of the Royal Exchange. He left to the hospital the sum of 45,101*l.* in stock, and also a vessel with its cargo, which, on being sold, produced 10,082*l.*

Amongst the patrons of the charity, in addition to the King, may be found the names of the Emperor of Russia, and the kings of Prussia, Denmark, and Belgium.

Crushed Bones as Manure.—The use of crushed bones as a manure was first introduced in 1801, but the practice has not been extensively adopted until within the last twenty years. The application of this manure to light soils is now very general, and the result has been such as to raise the value of such lands most materially. The increasing demand causes large quantities of bones to be imported from foreign, and sometimes distant, countries. The numerous herds of cattle that roam in a state of nature over the plains of South America, used formerly to be slaughtered for the sake of their hides, tallow, and horns, which were brought to Europe. Their bones were left to whiten on the plains; but they are now carefully collected together, and ships are regularly dispatched to be loaded with them for the use of our farmers.—*Progress of the Nation, by G. R. Porter, Esq.*

The Hamilton and Townley Collections.—The name of Gavin Hamilton will be found so frequently associated with the finding of the best sculptures of the Townley Collection, that a short notice of him here cannot but be acceptable. He was born in Scotland, and was descended from the Hamiltons of Murdieston, but resided for the greater part of his life at Rome, the latter part of which was dedicated to the discovery of ancient monuments. He made excavations, and opened buried chambers in various places of the Roman State; in the Tor Columbaro, at Albani, Gabii, Velletri, Ostia, and, above all, in the Tiburtine villa, where the success which attended most of his researches has been already stated, and made ample amends for the loss which painting suffered by the intermission of his practice as an artist. In the Collection of the Museo-Pio-Clementino, next to the treasures of the Belvedere, the contributions of Gavin Hamilton in statues, busts, and bas-reliefs were by far the most important to the progress of arts and classic learning; and the best collections scattered over Russia, Germany, and England, like the Townley Collection, owe many of their principal ornaments to his discoveries. Nor was he less attentive to modern art; he published his 'Schola Italica Picturæ,' to trace the progress of its styles from Leonardo da Vinci to the successors of the Caracci. He died at Rome in 1797. His death is said to have been principally owing to anxiety of mind when the French took possession of the city. Mr. Thomas Jenkins also first visited Rome as an artist, but having amassed a considerable fortune, by favour of Pope Ganganelli, he became the English banker. He was driven from Rome by the French, who confiscated all they could find of his property. Having escaped their fury, he died at Yarmouth, immediately on his landing after a storm at sea, in 1798. He was supposed to have received hurt from a collection of cameos and intaglios which were found concealed immediately about his person. Mr. Byres returned to England about 1790. He died at Tonley in Aberdeenshire, at the age of eighty-four, in 1817.—*Library of Entertaining Knowledge—Townley Gallery.*

NEWCASTLE "PANTS," OR FOUNTAINS.



[“Pant” in front of the Freeman’s Hospital, Newcastle-upon-Tyne.]

THE word “*Pant*” is a provincialism, used on the borders of England and Scotland to express a fountain or well. In Jamieson’s ‘*Etymological Dictionary*’ it is thus defined:—

“*Pant*, the mouth of a town-well, or fountain. [Used in the] south of Scotland.”

The author quotes the following lines from a ‘*Joco-Serious Dialogue between a Northumbrian Gentleman and his Tenant*,’ 4to., 1686, in illustration of his explanation:—

“Then to the ‘*Pant*’ and oped the spout,
Hey-dash! the claret wine sprung out!”

Brand, in his ‘*History of Newcastle-upon-Tyne*,’ says, “The public fountains, which at Newcastle are of a particular construction, having each a small square reservoir before them for retaining the water for the use of horses, or for common domestic purposes, are called ‘*Pants*.’ Dr. Thomas Shaw, in ‘*Skinner’s Etymology*,’ tells us that pond was anciently pronounced

pand; which Skinner derives, with great probability, from the Anglo-Saxon, *pyndan*, to inclose, or shut up. I am inclined to suppose that ‘*pant*’ is no more than *pand*, by a very small corruption, meaning a little reservoir or pond. In a deed, dated 1450, relative to the public fountain in the market-place of Durham, which is of construction similar to those of Newcastle, I find this word thus used—‘*Ejusdem fontis caput vulgariter nuncupat’ le Pant Head* *.’”

The important subject of a proper supply of water has long been a matter of great interest to the inhabitants of Newcastle-upon-Tyne. The earliest account which Brand says he found respecting the construction of aqueducts for bringing water into the town is dated 1349. Leland says, in his ‘*Itinerary*,’ that “there be three hedds of conduites for fresh water to the town.” The top of Pandon Bank, an elevation in the imme-

* This is a curious mixture of Latin and Anglo-Norman, and may be rendered “the fountain head, vulgarly called the ‘*Pant*’ Head”

diate neighbourhood of the town, has been termed for a long period "Conduit Head." Brand states that this hill abounds with many fine springs, and supposes that, during the Anglo-Saxon era, there was a reservoir here; he thus conjectures the etymology of the name—Pandon, the hill of the pand, or pond, or reservoir.

In the year 1657 there was a complaint made before the common council against Mr. Ralph Jennison and Mr. William Wallis, coal-owners, for having diverted a third part of the water usually coming to the "pans" in Newcastle, by sinking below the level of the water-course. Mr. Jennison was threatened with a prosecution on this occasion; but on his submission, and staying the workings, the common council put a stop to their proceedings against him.

Amongst other notices respecting the supply of water, the two following may be extracted:—

In 1737 an order of the Common Council prohibited the bringing of water into any of the houses of the inhabitants, except the mayor, recorder, aldermen, sheriff, and town clerk.

This, of course, means that none but these privileged inhabitants were to have water introduced by pipes into their houses, in order not to diminish the supply at the "pans" for the use of the inhabitants generally.

In 1777, the Common Council, in order to obviate the great deficiency of water which was felt by the inhabitants, accepted the liberal offer of George Stephenson, Esq., of Elswick, and expended upwards of 500*l.* in preparing aqueducts for bringing water from his property into the town.

The "pant" represented in the wood-cut stands in front of the Freeman's Hospital, Newcastle. The proper name of this charity is the "Hospital of the Holy Jesus;" but it has been popularly called "the Town's," and more commonly "the Freeman's Hospital." It was projected in 1681. In the 'Twenty-third Report of the Charity Commissioners,' it is stated that by an indenture bearing date the 26th March, 1683, the mayor and burgesses of Newcastle-upon-Tyne founded an hospital for the relief of freemen and freemen's widows, or sons and daughters of freemen, being unmarried, in certain buildings which they had erected for that purpose, on a parcel of ground called the Manors, which was incorporated by the title of "The Master, Brethren, and Sisters of the Hospital of the Holy Jesus." The mayor, aldermen, and common council, for the time being, were appointed visitors. In Bourne's account of Newcastle, (written upwards of a century ago,) the following description of this hospital is given:—

"You ascend to it by stairs from the High Street, and then enter into a pleasant field, on the north side of which is the said hospital. It is three stories high, and the under story is adorned with piazzas, which are about sixty yards in length, and make a very agreeable walk. About the middle of the piazzas is the entrance into the second and third stories, and over against this entrance is a fountain (very much beautified) for the use of the hospital."

There are a considerable number of "pans" in Newcastle, most of them curious on account of their antiquity, and several interesting on account of the beauty of their forms. The one represented in the wood-cut has been supposed to be of Roman workmanship—but it is not stated on what authority this opinion rests. The hospital itself is about 150 years old.

THE FALLS OF NIAGARA.

[From a Correspondent.]

AMONG all the wonders of Nature, there was nothing during my school-boy days that excited my young imagination so intensely as did the accounts and sketches of "the mighty Falls of Niagara." I yet

distinctly remember how I used to read,—and wonder,—and think,—and feel; but *then* I did not dare to hope that I should, in after-life, become as familiar with the whole course of the Niagara River ("the Falls" of course included) as I was with the meanderings of the simple streamlet which flowed through the adjoining meadows of the cottage-farm upon which I then resided.

It was after an early dinner, on a delightful afternoon in the latter part of May, that I set out on foot from the rural little town of Fort George, where I had stopped the preceding night, and which was, in fact, my first night in Canada. The distance was fifteen miles; and the day being somewhat warm, notwithstanding my impatience to gratify a curiosity I had entertained for nearly a quarter of a century, I walked leisurely and silently along. There was scarcely a breath of air to mingle with the fragrance of the blossoming wild cherry-trees, which overhang the road where it winds along the Canadian bank of the deep and tranquil Niagara River; nor was there a cloud in the heavens to darken the bright beams of the declining sun, or to throw its shadow on the pale-green waters as they stole away almost imperceptibly. I had been told marvellous tales of the vast distance to which the thundering noise of these falls might be heard; and although I did not implicitly credit them, yet I could not help stopping occasionally for a few minutes, under the shadow of some wide-spreading oak, and listening attentively to catch the indistinct rumbling of this mighty fall of waters;—but not a sound, save the hum of the busy bee, broke the perfect stillness of the surrounding scene. I had not yet ascended "the Mountain," as an elevated table-land, of about 300 feet in height, is pompously denominated, which stretches across the whole district, and operates, there is no doubt, against the noise of the falls being heard in the plain below. From a rocky gorge in this "mountain" issues the troubled Niagara. From the appearances presented by the time-washed rocks from Queenston to the present site of the cataract, there seems little reason to doubt but that over the very verge of the mountain the river, at some remote period, has rushed; and although the falls have receded fully seven miles, there is nothing in that circumstance, taking the quality of the rock into consideration, as well as the lapse of untold centuries, to render the supposition improbable. In addition to this might be added the testimony of those persons who have resided near the falls for the last forty or fifty years,—who can prove, from actual observation, the almost constant decay of the rocks over which the waters impetuously rush: during the above-named period, the cataract has actually receded several fathoms!

Having gained the upper table-land, I again lent my ears to catch the distant sound, which I longed exceedingly to hear,—and now I was not disappointed. However, as yet, the rumbling noise was very indistinct; and had I not been aware of the cause, it might have passed unheeded or unheard. But there was now another proof to convince me that I was fast approaching the scene I had so long panted to witness,—for I had a distinct view of a tolerably compact column of white mist ascending perpendicularly to a vast height, where it apparently encountered a current of upper air, which broke it into small fleecy clouds that floated horizontally towards the sunny west as far as the eye could reach. As I approached nearer, this column was truly beautiful; and before I had reached the immediate vicinity of the cataract, the sun had so far declined that his slanting rays were magically reflected in a beautiful bow thrown across the river, varying in its splendour according to the density of the ascending spray. Although I was a little weary with my long walk, I determined upon advancing to the very brink of the precipice, to view

this the sublimest of Nature's wonderful works, before I called at the neighbouring inn to partake of rest and refreshment. To effect my purpose, I scaled a lofty fence, and ran across the meadow as fast as my weary limbs would carry me; and in a few minutes I stood immediately above the main cataract, on an upper ledge of rocks, with the whole scene full in front of me. I could not think—I could not compare—I could not select or delineate; for my reason and imagination were alike confounded and overwhelmed with the awfulness and grandeur of the scene! I do not know how long I should have thus continued, so completely absorbed were all my faculties, had I not been called back—to earth, as it were—by a harsh voice bawling in my ear (for it was necessary to call loud in order to be heard), "I think, sir, you had better walk up to the hotel; for supper will be upon the table in a few minutes." The voice that had aroused me was that of Mr. F——, the landlord of the neighbouring hotel. I did not comply with his invitation, but the intrusion had dissolved the spell that bound me,—for I now began to examine in detail the scene before me; and the memory of by-gone days returning, without any other guide or interpreter, I was able to establish to my full satisfaction the chief points and features of the sublime picture; namely, the "Table Rock," the "Great Horse-shoe Fall," "Goat Island," and the "American Fall," with a small section thereof separated at the top by a projecting rock,—beside various other parts less remarkable and striking: and it was not until the time-scathed forest-trees threw their dark shadows across the foaming gulf beneath that I turned my back upon the scene, and walked slowly and thoughtfully to the hotel at the top of the meadow. I will not attempt a general description of what Nature never intended should be copied; for were I able to paint with human accuracy the different portions of this stupendous cataract, with its ever-ascending column of misty spray, and give to the iris, with which the morning and evening sun adorns the wild scene, all the beauty and loveliness of its primitive colours,—yet would there be wanting the everlasting and deafening thunder, which nearly destroys the sense of hearing, as well as the superior interest which reality must ever possess over the most accurate and masterly copy.

The distance from the inn where I lodged to the nearest part of the Great Horse-shoe Fall is about 300 yards; yet the concussion of air caused by the cataract is so great, that the window-frames—and indeed the whole fabric—are continually in a tremulous motion; and in winter, when the wind drives the spray in the direction of the buildings, the whole scene is coated with sheets of ice.

After this, my first visit to the falls, I resided for several years in their immediate vicinity; and although I never beheld them without experiencing highly-excited emotions, yet I must confess I never afterwards felt the delirium produced on my first visit. I afterwards attempted to establish, with some degree of accuracy, the precise distance to which the rumbling sound of the falls could be heard in a calm and still summer night; and from the observations I was enabled to make, I feel fully satisfied that at a greater distance than eighteen or twenty miles the noise cannot be heard.

Although some writers have absurdly asserted that Indians in their canoes have descended these falls in safety, it is the general opinion of persons long resident in their vicinity, that not even the different sorts of fish that happen to be forced down this cataract ever escape with life; and what seems strongly to corroborate this opinion, are the numerous dead fish daily seen floating in the gulf immediately below. Wild-fowl, too, unmindful of their danger, or floated down while they are asleep, find it impossible to escape destruction if

once drawn within the verge of the main cataract. In the year 1827, a few individuals agreed to try an experiment, and for this purpose they purchased a large schooner of 140 tons burden, that had previously, during many years, navigated the waters of Lake Erie. This vessel was towed down the river to within half a mile of "the Rapids," where it was cut adrift and left to its fate. The Rapids are caused by numerous ledges of rock, from two to four feet high, extending wholly across the river, over which the water successively pitches for about the distance of one mile, immediately above the main cataract. The vessel got safely over the first ledge, but upon pitching over the second, her masts went by the board, she sprung a leak, and filled with water; but continued nevertheless to float, though she changed her position to stern foremost, in which manner she took her last plunge over the main fall, her bowsprit being the last part that was visible of her. She of course never rose more; but numerous fragments of her timbers and planking were picked up some miles below, in very small pieces,—bruised, torn, and shivered. There were two bears, and some other smaller animals, on board of this vessel when she was cut adrift; but the bears seem to have had some unfavourable misgivings of the safety of the voyage, and, therefore, when she sprung a leak and floated stern foremost, they stepped overboard, and with much difficulty succeeded in swimming ashore, after having been carried half way down towards the main cataract by the rapidity of the current. No trace of the smaller animals was ever discovered.

METROPOLITAN SAVINGS' BANKS.

THESE excellent economic institutions have created, during the few years which have elapsed since their establishment, a habit of forethought and economy—a frame of mind disposed to regard a future and substantial advantage rather than a momentary gratification—in not fewer than 78,453 individuals, which was the number of depositors in the twenty-eight Savings' Banks in Middlesex when the accounts were recently made up. In the three city banks 21,744 persons deposited sums amounting on an average to 22*l.* each; and in the other metropolitan banks 56,854 depositors had sums invested amounting to 25*l.* each on the average. The total sum deposited amounted to 2,052,346*l.* If the concentration of a population affords better opportunities for making known the advantages of savings' banks, there are, on the other hand, many causes in operation which unfortunately prevent their being available to great numbers. The temptations to dissipation and extravagance everywhere present themselves in a great city, and its population should therefore be armed with an additional degree of prudence and intelligence to be capable of resisting them. That they have been resisted to a gratifying extent is obvious; and there can be little doubt that the cheapness of obtaining mental enjoyments has been one of the most powerful means of enabling them to arrive at this desirable result. The metropolis in this respect is in advance of the country; for if wages be higher on the average, there are more abounding demands ever ready to engross them, and a continual vigilance can alone prevent this taking place. The population of Middlesex forms one-ninth part of the population of England; but the number of depositors in savings' banks is equal to one-fifth of the number of the depositors in the kingdom. The manner in which the poor-laws were administered until within the last two years may account for large portions of the population being almost strangers to institutions of the class under notice. It is most desirable that we should have the means of

judging of the extent to which a return to a more wholesome system will affect the industrious poor whom it so grievously oppressed.

One of the most recently-established banks for savings in the metropolis appears, from the accounts before us, to be the Marylebone Bank, which commenced in July, 1830. A few months afterwards it had received the sum of 3952*l.* from 460 depositors, being about 8*l.* 10*s.* from each. In the month of November, 1835, the number of depositors had increased fourteen fold, and the sum invested had increased twenty fold. The number of depositors was 6470, and the amount deposited 93,374*l.* 1*s.* 8*d.*, or 14*l.* 8*s.* 7½*d.* on an average for each of the 6470 persons who have had the prudence to place their savings—which would otherwise have been imperceptibly wasted—in the institution. Most of the other banks in the metropolis were established ten or twelve years before the Marylebone Bank, and the depositors not being of such long standing as in those banks, the savings invested do not separately amount to so large a sum as where the process of setting aside money, not actually wanted at the time, has been going on for a much longer period. But it is exceedingly satisfactory to notice the progress made, and time alone is required to raise the amount of each depositor's share to a sum not inferior to those possessed by the depositors in any other bank. The capital has increased twenty fold since 1831, and the number of depositors having only increased fourteen fold, the amount belonging to each has necessarily become greater, and, from being about 8*l.* only, has reached an average exceeding 14*l.* From November to July the investments have increased more than *one-fourth*; so that it is probable that not only has the sum of each depositor been greatly increased since November, but a considerable number of individuals have been induced to avail themselves of the advantages which the institution holds out.

The number of female depositors in the Marylebone Bank in November was 2466; of male depositors 4004, being not quite two to one. The largest class of depositors consists of female servants. They amount to one-fifth of the whole number, or 1290, and they each possess on an average about fifteen guineas, or in the whole, the sum of 20,407*l.* 8*s.* 10*d.* The male servants are not so numerous a class, and scarcely form one-tenth of the whole number of depositors, being just half as numerous as the female depositors; but the amount invested by them is higher, being for each, 626 in number, a sum of 21*l.* 16*s.*, or 13,664*l.* 4*s.* 10*d.* The sum invested by male and female servants conjointly is 34,071*l.* 13*s.* 8*d.*, or more than a third of the whole sum invested, though, as compared with the number of depositors, they form considerably less than one-third. It may stimulate this class to continue the practice of laying by their savings when they learn that in the Devon and Exeter Savings' Bank 865 male servants have invested a sum of 43,611*l.*, or above 50*l.* each; and that the sum invested by 3558 female servants amounts to 106,022*l.*, or above 30*l.* each. Dress-makers, milliners, needle-women, and shop-women have laudably placed a part of their earnings in the Marylebone Bank. This act is the more meritorious as their earnings are comparatively small, while they are at the same time compelled to keep up a superior appearance, and are indeed peculiarly exposed to the temptation of making an unnecessary display; yet in spite of the various obstacles in their way, 621 have invested a sum of 8780*l.*, or above 14*l.* each. Of clerks, shopmen, and warehousemen, there are 219 depositors whose investments amount to 14*l.* 16*s.* each. The average sum invested by 793 mechanics and artisans is about ten guineas. The investments of schoolmasters and teachers is about 16*l.* on an average for each; and

those of schoolmistresses and female teachers to 22*l.* each. A number of depositors have wisely commenced the practice of economy betimes, and it is pleasing to learn that about a tenth proportion consists of children and youth of both sexes; viz., 284 females and 342 males. The investments of the former amount to 5*l.* 16*s.* for each; of the latter to 4*l.* 12*s.*; and the total amount of their joint deposits exceeds 3200*l.* There are eighty-two apprentices who have each put by about 4*l.* In the Devon and Exeter Banks 443 apprentices have acted in the same praiseworthy manner, and each on the average has in the bank a sum of nearly 6*l.* These young depositors may be informed that a shilling a week put into the savings' bank, and allowed to accumulate at compound interest, that is, neither to withdraw the principal, nor the interest which is every year added to it, and continuing the weekly deposit of a shilling for the space of ten years, will at the end of that period be in possession of a sum amounting to 30*l.* 7*s.* 5*d.*, or, 4*l.* 7*s.* 5*d.* more than was put into the bank. In the same way 2*s.* a week will produce 60*l.* 14*s.* 10*d.* in ten years; 3*s.* a week will amount to 91*l.* 2*s.* 3*d.*; 4*s.* a week to 121*l.* 9*s.* 8*d.*; 5*s.* a week to 151*l.* 17*s.* 1*d.*; 6*s.* a week to 182*l.* 4*s.* 6*d.*; and 7*s.* a week will, if the interest be allowed to accumulate, amount to 212*l.* 11*s.* 11*d.*; and in twenty years 7*s.* a week will in like manner amount to 510*l.* 1*s.* 4*d.* It is quite unnecessary to say anything as to the valuable uses which a prudent man may make of a small capital, or of the moral benefits resulting from the practice of a system of economy which is pursued in a wise and liberal spirit. In addition to the direct investments of young persons of both sexes, to the number of 708, rather more than one-fifth of the accounts are opened as trusts, chiefly on behalf of children. The number of this class of accounts is 1310, and the sum invested exceeds 20,000*l.*, or about 16*l.* each.

The excellent system of classification observed in keeping the accounts of the Marylebone Bank is worthy of being followed by all other similar institutions. A more correct idea could then be formed of the social position of various classes, of the manner in which their interests are affected by a variety of causes which every now and then are supposed to be acting upon first one or another portion of the community. A classified system at only one or two of the metropolitan banks does not aid any inquiry of a general nature so fully as could be wished. It would be interesting to know the differences which exist between one class and another—between the western portion of the metropolis and the eastern. The results would aid many plans of a practical nature which are directed to the amelioration of every class, and all attempts to furnish these desiderata are deserving of the thanks of those who are anxious to proceed in the career of improvement.

HABITS OF BATS.

(From the 'Penny Cyclopædia.')

GENERALLY speaking, bats remain in concealment during the day in caverns, ruinous buildings, hollow trees, and such hiding places and flit forth at twilight or sunset to take their prey. White, in his 'Selborne,' thus describes the mode of feeding of a tame bat: 'It would take flies out of a person's hand; if you gave it anything to eat it brought its wings round before the mouth, hovering and hiding its head, in the manner of birds of prey when they feed. The adroitness it showed in shearing off the wings of flies, which were always rejected, was worthy of observation and pleased me much. Insects seemed to be most acceptable, though it did not refuse raw flesh when offered; so that the notion that bats go down chimneys and gnaw men's bacon, seems no improbable story. While I amused myself with this wonderful quadruped I saw it several times confute the vulgar opinion, that bats, when down on a flat surface, cannot get on the wing again, by rising with great

ease from the floor. It ran, I observed, with more dispatch than I was aware of, but in a most ridiculous and grotesque manner.' The large-eared bats, collected by Carlise, refused, according to Shaw, every species of food for four days, as did a large number which were afterwards caught and preserved in a dark box, for above a week. During the day-time they were extremely desirous of retirement and darkness; and, while confined to the box, never moved or endeavoured to get out the whole day; and when spread on the carpet they commonly rested some minutes, and then, beginning to look about, crawled slowly to a dark corner or crevice. At sunset the scene was quite changed: every one then endeavoured to scratch its way out of the box; a continual chirping was kept up, and no sooner was the lid of their prison opened than each was active to escape; either flying away immediately, or running nimbly to a convenient place for taking wing. When these bats were first collected, several of the females had young ones clinging to their breasts in the act of sucking. One of them flew with perfect ease, though two little ones were thus attached to her, which weighed nearly as much as the parent. All the young were devoid of down, and of a black colour. But one of the most interesting and detailed accounts of the habits of these animals is to be found in the statement made by Mr. George Daniell to the Zoological Society of London on the 11th November, 1834, and we accordingly give it from the 'Proceedings' of that society. The bats consisted of two species, the *Pipistrelle* (*Vespertilio Pipistrellus* of Geoffroy) and the *Noctule* (*Vespertilio Noctula* of Schreber). Mr. Daniell stated that in July, 1833, he received five specimens, from Elvetham in Hampshire. Many more were congregated together with them in the ruins of the barn in which they were taken, but all the rest escaped. They had been kept in a tin powder canister for several days, and on being turned loose into a common packing case, with a few strips of deal nailed over it to form a cage, they exhibited much activity, progressing rapidly along the bottom of the box, ascending by the bars to the top, and then throwing themselves off as if endeavouring to fly. They ate flies when offered to them, seizing them with the greatest eagerness, and devouring them greedily, all of them congregating together at the end of the box at which they were fed, and crawling over, snapping at, and biting each other; at the same time uttering a grating kind of squeak. Cooked meat was next presented to them, and rejected; but raw beef was eaten by them with avidity, and with an evident preference for such pieces as had been moistened with water. This answered a double purpose; the weather being warm, numbers of the blue-bottle flies (*musca vomitoria* of Linnæus) were attracted to the meat; and on approaching within range of the bats' wings were struck down by their action, the animal itself falling at the same moment with all its membranes expanded, and covering over the prostrate fly, with its head thrust under in order to secure its prey. When the head was again drawn forth the membranes were immediately closed, and the fly was observed to be almost invariably taken by the head. Mastication appeared to be a laboured operation, consisting of a succession of eager bites and snaps, and the sucking process (if it may be so termed), by which the insect was drawn into the mouth, being much assisted by the looseness of the lips. Several minutes were employed in devouring a large fly. In the first instance the flies were eaten entire, but Mr. Daniell afterwards observed detached wings in the bottom of the box. These, however, he never saw rejected, and he is inclined to think that they are generally swallowed. A slice of beef attached to the side of the box was found not only to save trouble in feeding, but also by attracting the flies to afford good sport in observing the animals obtain their food. Their olfactory nerves appear to be very acutely sensible. When hanging by their posterior extremities, and attached to one of the bars in front of the cage, a small piece of beef placed at a little distance from their noses would remain unnoticed; but when a fly was placed in the same situation they would instantly begin snapping after it. The beef they would eat when hungry; but they never refused a fly. In the day-time they sometimes clustered together in a corner; but towards evening they became very lively, and gave rapid utterance to their harsh grating notes. One of them died on the fifth day after they came into Mr. Daniell's possession; two on the fourteenth; the fourth survived until the eighteenth; and the fifth until the nineteenth day.

Antiquarian Enthusiasm.—The following anecdote is related in Nichols's 'Illustrations of Literature,' upon the authority of Mr. Dallaway, vol. iii., p. 727. Upon the receipt of a letter at Townley, from Mr. Jenkins, the then English banker at Rome, promising him the first choice of some discovered statues, Mr. Townley "instantly set off for Italy, without companion or baggage; and, taking the common post conveyance, arrived *incognito* at Rome, on the precise day when a very rich cava was to be explored. He stood near, as an uninterested spectator, till he perceived the discovery of an exquisite statue, little injured, and which decided his choice. Observing that his agent was urgent in concealing it, he withdrew to wait the event. Upon his calling at Mr. Jenkins's house in the Corso, who was not a little surprised by his sudden appearance, the statue in question was studiously concealed, while the other pieces were shared between them with apparent liberality. Mr. Townley remonstrated, and was dismissed with an assurance that, after due restoration, it should follow him to England. In about a year after Mr. Townley had the mortification to learn that the identical young Hercules had been sold to Lord Lansdowne at an extreme, yet scarcely an equivalent, price." This transaction must have occurred some time before 1790. It was in that year that the Hercules was sold by Mr. Jenkins to Lord Lansdowne. A different story is, however, told of this Hercules in the account of it in the first Dilettanti volume, pl. xl. Mr. Townley is there stated to have had the choice of the two statues at the time they were discovered; to have fixed from description, but afterwards to have repented of his choice.—*Library of Entertaining Knowledge—Townley Gallery.*

History and Literature of Chess.—The game of chess is of great antiquity, and appears to have been invented in China or Hindostan. Sir William Jones inclines to the latter supposition. In the second volume of the 'Asiatic Researches,' he says, 'We may be satisfied with the testimony of the Persians; who, though as much inclined as other nations to appropriate the ingenious inventions of a foreign people, unanimously agree that the game was imported from the west of India in the sixth century of our æra. It seems to have been immemorably known in Hindostan by the name of *Chaturanga*, i. e., the four *angas*, or members of an army; which are these, elephants, horses, chariots, and foot-soldiers; and in this sense the word is frequently used by epic poets in their descriptions of real armies. By a natural corruption of the pure Sanscrit word, it was changed by the old Persians into *chatrang*; but the Arabs, who soon after took possession of their country, had neither the initial nor the final letter of that word in their alphabet, and consequently altered it further into *shatranj*, which found its way presently into the modern Persian, and at length into the dialects of India, where the true derivation of the word is known only to the learned. Thus has a very significant word in the sacred language of the Brahmins been transformed by progressive changes into *axedraz*, *scacchi*, *ehecs*, *chess*; and by a whimsical concurrence of circumstances has given birth to the English word *check*, and even a name to the *exchequer* of Great Britain.' He speaks also of 'the *rat'h*, or armed chariot, which the Bengalese pronounced *rot'h*, and which the Persians changed into *rokh*, whence came the *rook* of some European nations; as the *vierge* and *fol* of the French are supposed to be corruptions of *ferze* and *fil*, the prime minister and elephant of the Persians and Arabs.' It is perfectly clear that chess was not known to the Greeks or Romans; indeed it is commonly supposed not to have been introduced into Europe till the time of the Crusaders; though there is a set of Latin verses in Hyde, describing the game, which is said to have been written during the time of the Saxons, and therefore a good number of years before the first crusade. Several points in which the eastern game now differs from ours were then observed in Europe.—*Penny Cyclopædia.*

* * The Office of the Society for the Diffusion of Useful Knowledge is at 59, Lincoln's Inn Fields.

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TEUTONIC AND SCANDINAVIAN ROMANCES.



[Frescoes of the Nibelungen.]

THE romances of ancient Germany, with the wild metrical tales of Denmark, Norway, and Sweden, are numerous, and in many respects highly interesting. Rude as they are, they served as the mould in which much of the poetry of northern Europe is cast, and their undoubted antiquity carries us back to the times of the Saxons, Norsemen, Danes, and those warlike tribes that, under different names, occupied or overran England and a great part of Europe from the fourth to the tenth century of the Christian era. In the mixed stream which flows in the veins of Englishmen, the blood of these Teutonic and Scandinavian races forms by far the larger part; for even the Normans, whose conquest is generally supposed to have altered and modified our race by intermarriages, were in reality only recently sprung from the same great northern stock as the Danes and Saxons they came to conquer. We may therefore regard the heroes of these ancient romances in the light of ancestors. An additional interest arises out of the circumstance, that these rude but characteristic monuments, however exaggerated they may be, are the only native records we possess of that by-gone time; they speak where history is silent, and, in the absence of all other evidence, claim our attention. "The legends of a rude people," says a learned writer on this subject, "are, it is true, when first produced, wild and strange like themselves; and, when preserved only by tradition, soon become extravagant and confused, furnishing but very insufficient data for establishing the certainty of political events; they afford, nevertheless, the only pictures which remain of the ages which gave rise to, and which preceded them. If we see how things are at present, and feel a laudable desire to know from what origin they arose, through what gradations they have passed, and how they came to be moulded into the form in which we find them, we must look, for the state of our forefathers, into their ancient rhymes, which served as their memorials and annals*."

If it is not possible to separate the sober truth of things from the exaggerations and inventions of the bards, we can judge of the tastes and habits of the people (whose main and almost only intellectual delight was found in these ballads and romances) from the nature of the old compositions that have been preserved to us. In the same way, to omit many others of different times and nations, the 'Iliad' and 'Odyssey' of Homer, produced some hundreds of years before the Christian era, the 'Legends of Antar,' which preceded the birth of Mahomet in the seventh century, and the poem of the 'Cid,' which was written in the eleventh century, may all serve as indexes of the prevailing tastes and customs in Greece, Arabia, and Spain at those different periods, and the times that preceded them. In one capital feature all these present a monotonous resemblance, for all agree in extolling brute force, war, bloodshed, rapine, and cunning; but as they reflect the predilections of various races of men, living at periods remote from each other, they thus help us to a great historical truth, while some of their minor details present generic differences that distinguish race from race, and country from country. The lays of our fierce northern ancestors are as blood-stained and as ancient as many of these national records, and in number exceed those of most countries.

Tacitus, writing in the first century of the Christian era, makes mention of the songs of the ancient German bards; many of which, six centuries later, are said to

have been collected by the order of the Emperor Charlemagne. The oldest existing specimen of Teutonic poetry is a creed entitled 'De Poeta Kazungali,' which appears to be considerably older than the time of Charlemagne. A few other fragments, half chronicle, half legend, and in the vernacular tongue of the old Germans, which are still preserved in continental libraries, may be safely assigned to the eighth, ninth, and tenth centuries. The celebrated *Nibelungen Lay*, as it now exists, appears to have been written about 800 years ago, but, like many others of the romances and heroic ballads, it is evidently a *rifacciamento* of something much older. It was indeed the common custom of the minstrels of the eleventh, twelfth, and thirteenth centuries to revive and modernize the ancient lays, loading them with marvellous fictions, and introducing sentiments and references to customs and discoveries of their own age, to render them more acceptable to their contemporaries. The song of the *Nibelungen*, of which we shall give an abstract in the course of these notes, seems, however, to have been less altered by later hands, and to have preserved more of its rude, fierce, original character, than any of the rest. In it we find no trace of that chivalrous spirit which grew up in a later and (bad as it was) a more civilized and better age. The most savage and ferocious of the warriors are those who are most praised—there is none of that romantic feeling which elevates the fairer and the weaker sex, and which is at once the consequence and the cause of advancing refinement—there is no obedience, no deference, no attention to the ladies, who are indeed frequently more savage than their lovers. The absence of all these milder virtues and romantic feelings establishes the antiquity of the *Nibelungen Lay*, just as their presence, even without anything else, proves Macpherson's 'Ossian' to be the production of a modern age.

The chivalrous and romantic spirit penetrated into Germany, and began to tincture all the Teutonic literature in the course of the twelfth century, when their brilliant contemporaries, the Troubadours of Provence, and the Trouveurs of Normandy, served as models to the northern minstrels. It was then that the most splendid period of Teutonic poetry commenced. "For the space of a century and a half, beginning about the middle of the twelfth, and ending with the reign of Rudolph of Hapsburgh, emperors, kings, princes, nobles, monks, and menial minstrels, vied with each other in producing and translating lays of love, romances, fabliaux, chronicles, fables, and sacred legends. The names and works of above 300 minstrels of that period have been preserved*."

It is not our present object to treat of this splendid period of German poetry and romance, but we may devote a few words here to the singular system which followed it, and gradually overspread the whole country. When verse fell into disrepute among the princes and nobles, and the minstrels were no longer courted in the castle-halls, the art transferred itself to cities and towns; and being taken up by sober, calculating burghers, it was soon converted into a regular craft and trade. The mechanics in this line, who measured verses by the yard, constituted themselves into guilds or companies, with their masters, treasurers, and other officers; and in their court of poesy passed judgment upon any member that did not conform to the rules and regulations established by their society. Every verse-maker had to pass through the degrees of apprentice-poet and journeyman-poet before he could receive the envied title of master of the craft. They were sent on their travels of improvement through Germany, just

* Introduction to 'Popular, Heroic, and Romantic Ballads, Translated from the Northern Languages,' by R. Jamieson, A.M., &c. Included in 'Illustrations of Northern Antiquities,' 4to., Edinburgh, 1814.

* 'On the Teutonic Romances,' by Henry Weber, in 'Illustrations of Northern Antiquities.'

as young tailors, shoemakers, blacksmiths, and other mechanics are to this day, before they can be allowed to set up as masters in any part of that country. In whatever town they arrived they repaired to the guild, or house-of-call for verse-makers, and were received and treated with beer and wine and sauer-kraut, according to their standing and the rules of the confederation. Some traces of these odd customs are still to be found in the old-fashioned city of Nuremberg. The pedantry of the rules for composition laid down by this body corporate of poets, which, strange to say, endured for upwards of three centuries, appears to have been excessive; and its effects were soon seen in the total banishment of not only the wild, irregular exuberance of the old minstrels, but of all fancy and imagination whatsoever. The worse the poetry became in quality, the more did it increase in quantity. Apprentices, journeymen, and masters were at work in all directions, and single pieces of twenty, thirty—nay, seventy thousand verses came to be considered as not a whit too long for these remorseless men, who wrote on mechanical principles, with rule and line in hand. The quantity of work reported to have been turned out by Hans Sachs, one of the best of these master-singers, is truly prodigious. Hans was a shoemaker, and it is said he used the awl and the pen alternately; but we cannot believe he could find time to make or mend many shoes, seeing that besides 4275 master-songs, which he was obliged to furnish for the trade, he wrote 6840 poems of various sorts and sizes. Hans Sachs was born in 1494 and died in 1576.

Several of these craftsmen, however, showed considerable talent for satire; and their verses in the vulgar tongue, which were current among the people, are said to have contributed in no slight degree to the advancement of the reformation in Germany. Sebastian Brandt, who was born at Strasburg in 1458, and died in 1520, had the fortune to produce a work which became immediately popular in other countries as well as in the land of the master-singers; and which still floats above the pool of oblivion, where so many thousand contemporary productions are sunk. His 'Ship of Fools' was translated several times into Latin, French and Dutch. Alexander Barclay did it into English in the time of Henry VIII.; and as the press was now getting into active operation, twenty editions of the original, with sundry alterations, were printed in Germany alone before 1626.

But we must return to the productions of much earlier ages, the staple of which was transmitted for some length of time merely by oral tradition. The song of the Nibelungen is the most ancient of all the Teutonic metrical romances that have been preserved entire. There are three old manuscript copies of it at St. Gall, Hohenems, and Munich, which were all consulted by the learned Miller, who printed a complete edition of the poem, in a collection of similar works, in the latter part of the last century. As soon as these antique productions became diffused through the medium of the press, they produced a sensible effect on the literature and fine arts of Germany. The painters, in particular, began to seek for subjects and for inspiration in the quaint and striking incidents of the Teutonic romances; and in this way they have, in many instances, attained to an originality and a nationality which we look for in vain among the historical painters of the rest of Europe. The magnificent frescoes engraved at the head of this article are from the pencil of Schnow, and represent the principal adventures of Siegfried and Chrimhild, the hero and heroine of the song of the Nibelungen.

[To be continued.]

PROGRESS FROM BARBARISM TO CIVILIZATION.

(From a Lecture, delivered before the Mechanics' Institute at Colchester, by Henry Tufnell, Esq.)

THE subject which, with your permission, I shall discuss, is—Whether the progress from utter barbarism to civilization can take place without the intervention of some external influence?—Whether the savage, without the example and assistance of some more civilized nation, could emerge from his wild state, and place himself, both with regard to moral cultivation and intellectual refinement, on a level with the most polished portion of his fellow-men?

It might at first sight appear that a subject of so wide and comprehensive a nature was hardly adapted for discussion in this place; but I feel confident of being able, before I have finished, to make it evident to all, that the consequences which may be deduced from a proper solution of this question are such as ought to arrest the attention of all classes, and particularly those whom I now address;—to whom the march of social improvement, and the general progress of civilization, cannot but be a matter of the deepest interest. We shall see how an argument may be drawn by analogy in favour of a national system of education—we shall learn to appreciate more highly the blessings with which, in this civilized state of society, we are surrounded;—and, in tracing the various stages through which the human race has passed, we shall be enabled to expose the fallacies of those who contend that the accumulation of national wealth is adverse to the growth of national virtue.

It has been asserted that there is no record of a tribe of savages, properly so called, rising into a civilized state without instruction and assistance from a people already civilized: while, on the other hand, it was the opinion of no less an authority than the historian of the 'Decline and Fall of the Roman Empire,' that the discoveries of ancient and modern navigators, and the domestic history or tradition of the most enlightened nations, represent the *human savage* naked both in mind and body, and destitute of laws, of arts, of ideas, and almost of language. From this abject condition—perhaps the primitive and universal state of man—he has gradually arisen to command the animals, to fertilize the earth, to traverse the ocean, and to measure the heavens.

Again, M. Tocqueville, the learned author of 'Democracy in America,' observes, that if we study history, it will appear that, in general, barbarous nations have raised themselves to a state of civilization by slow degrees, and through their own unassisted exertions. Whenever they have derived any light from a strange nation, it has been when they stood, with regard to it, in the relation of a conquering, not a conquered, race.

It would occupy too much of your time, nor could I venture, within the compass of a single lecture, to consider this question in all its different bearings: but you will at once perceive to what opposite results in the history of man these two doctrines inevitably lead.

If the savage, by the exercise of his own unassisted energies, is incapable of acquiring the habits of civilized and polished life, the next question that naturally presents itself is—Whence could civilization have been originally derived? From what quarter could our first parents have obtained those germs of improvement which have been transmitted by some portion of their descendants through a succession of ages? The only answer is,—*By inspiration from above*: for under our present hypothesis, if man had been created a savage, he would always have continued such; while, on the other hand, as our consciousness that man could not make himself has been adduced as a proof of a *divine Creator*, so the impossibility of man civilizing himself may be brought forward as a proof of a *divine Instructor*.

CHURCH OF LA MADELEINE, PARIS.



[Church of La Madeleine.]

THE erection of this edifice, like that of many other of the public buildings in Paris, has been affected by the vicissitudes which public events have from time to time occasioned in France during the last fifty years. The population of the village of Ville L'Evêque, now annexed to Paris, having, towards the middle of the last century, increased to such an extent as to require additional church accommodation, the construction of a new parochial church was commenced by direction of Louis XV. The first stone was laid on the 3rd of April, 1764. In 1777 the architect died, and the revolution of 1789 led to the suspension of the works. It was not likely that they should be resumed under the rule of Robespierre, and several years elapsed before the country was in a condition, either morally or financially, to enable the government to pay much attention to the erection of ecclesiastical edifices. After a delay of eighteen years the Emperor Napoleon, under whom the military rather than the ecclesiastical power was predominant, proposed to convert the building into a Temple of Glory, dedicated to his armies. The present structure was in consequence commenced in 1808. Again the works were suspended on account of political events, and from 1813, when the allies invaded France, up to 1816, no progress was made towards the completion of the building. In 1816 the clergy exercised greater influence than any other class in the state; a large portion of the nation was sick of the incense which had been perpetually offered to the military, and Louis XVIII. directed that the building should be completed as a church, and that it should contain monuments to the memory of Louis XVI. and his queen, Marie Antoinette, their young son Louis XVII., and Madame Elizabeth. This intention is not likely to be carried into effect, but the edifice is on the point of completion, and will be used as a church. The Pantheon is already dedicated to the celebrated men whom France has produced, and that building is

the depository of their remains. Napoleon, however, reversed the decree of the national assembly, and religious worship was in consequence again conducted within its walls. Under the restoration the remains of Voltaire and Rousseau, which had been deposited in the building when it was intended to serve as the burial-place of remarkable men, were removed to an obscure vault. Since the revolution of 1830 the Pantheon has again reverted to the purposes for which it was decreed by the national assembly.

The form of the Madeleine is a parallelogram, surrounded by a portico formed of columns of the Corinthian order, which rest upon an elevated basement, and are surmounted by an entablature. Each front is supported by eight columns, and an emblematic design on a large scale fills the angles of the pediment. The height of the basement is seven feet and a half, and of the columns seventy-two feet. Eight Corinthian columns, fifty-four feet in height, divide the nave from the aisles. The style is that of a Grecian temple. The architecture of La Madeleine forms a highly-striking contrast to that of Nôtre Dame. Each edifice represents an epoch, and the architecture of the middle ages is less in character with the present times and the existing national spirit than the fine specimen of an earlier style of architecture which the Madeleine presents.

The position of the Madeleine is extremely well calculated to give effect to its magnificent and well-proportioned dimensions. In proceeding from the Boulevard des Italiens it catches the eye, and as the numerous Corinthian columns on which it rests come successively into view, it cannot fail to excite admiration even in those who are ignorant of the rules of architectural elegance and beauty. Seen from the middle of the Place Louis XVI., though it enters into competition with other commanding objects, it produces a fine effect. From the latter position are seen the Chamber

of Deputies and the Bridge of Louis XVI., adorned with fine marble statues; and opposite to these objects is the Madeleine. In a northern direction, at the end of the vista formed by the avenue of the Champs Elysées, is the Arc de Triomphe; and opposite to that fine monument is the Palace of the Tuileries and its pleasant gardens.

THE AMERICAN PANTHER.

THE panther of America differs but slightly from that so frequently spoken of by the historians of ancient Europe. It may be a little smaller, its colour somewhat lighter, or more tawny, but it is marked in that peculiar manner common to all this species of animals. It is naturally of a retired and solitary disposition, and seldom found in the immediate vicinity of "Settlements;" for, unless driven to it through absolute necessity, it is but rarely known to leave its favourite woods and thickets. Hunger, however, will sometimes force it from its fastnesses, on which occasions it has been known to attack the stoutest domestic animals; and although it may tear and lacerate a cow or an ox, I do not recollect an instance where it succeeded in destroying either. Yearling—or even two-year old heifers—it has been known to destroy, and having gorged itself with a portion of its victim, would then retire to its solitary retreats, and most likely never visit the same farm or neighbourhood any more. This animal has sometimes been found to measure two feet and a half high at the shoulder; but this seems somewhat above its usual size. The panther is decidedly the most formidable beast of prey on the continent of North America; for he is more powerful and courageous than the wolf, and his ferocity and great agility render him much more dreaded than the unwieldy bear.

I think it was in the autumn of 1831 that I was loitering homewards one afternoon from a hunting excursion, when my dog, which was gambolling along a rod or two in front of me, suddenly stopped, then retreated to my side, where, in an attitude of considerable alarm, he uttered a whining howl. I observed that his eyes were intently directed into the foliage of a branching oak-tree just in front of me; and I must confess I was somewhat startled on discovering the frightful visage of a large panther, as he was cunningly creeping towards the extremity of a decayed branch in the direction of the place where I stood, evidently preparing to make a desperate spring. I hesitated for a moment—it would have been destruction to me to have attempted a retreat—and it seemed equally hazardous to remain where I then was; for the glaring eyeballs of the savage animal were fixed upon me, regardless of my wolf-dog that crouched beside me, as he slowly and cautiously moved along the extended branch; while his teeth were slightly separated, through which there issued a low hissing sound, that was distinctly audible where I stood. Having advanced to the end of the limb, he was throwing himself upon his haunches previous to his intended bound, when his support gave way, and down he came headlong to the ground, uttering a fierce howl that might have been heard for miles through the silence of the surrounding forest. My dog was too much daunted to seize upon the momentary advantage this unforeseen accident afforded him, and the panther almost instantly darted up the tree again, making the very leaves of the surrounding forest to tremble with his loud and terrific cries. My own trepidation I must confess was too great for me to have ventured a discharge of my rifle; for had not the bullet struck some vital part, the certainty was, that the animal, infuriated by the smarting of his wound, would have instantly rushed upon me, and I should most probably have forfeited my life for the rashness of the

act. He again advanced along a limb of the tree on the side nearest to me, glaring down upon me for a moment with an appearance of increased malignity, and, uttering a sharp and shrill yell, threw himself into the attitude of springing. Collecting all my energies upon the desperate hazard of a shot, I levelled—and instantly discharged my rifle. The next moment I saw the body of the panther falling from the tree, when one thought of home and of my family flashed across my mind as I stood breathless and transfixed, but a very few yards from the spot where the animal reached the earth; but his convulsed form plunged heavily upon the ground, and rolling along the sear leaves dyed them with a copious stream from the blood-vessels of his heart, which my unerring ball had reached as he was in the very act of bounding. My dog, which had shown stronger symptoms of fear—I think I may say cowardice—than I had ever known him to do before, now ran furiously in upon the bleeding animal, but no attempt was made to repel the attack, no limb was moved or convulsed by the worrying and tearing at the throat; in fact, all sense and feeling had departed—the creature was quite dead.

Upon one of the tributary streams of the Alleghany, in the early settlement of that part of the country, was a narrow strip of meadow land, whose fertility was considered superior to all the surrounding vales and uplands; and consequently a few adventurous wanderers from the New England States were induced to settle in this, as yet, remote and solitary situation. A few years served to clear away the timber from a narrow belt running parallel with the mountain stream; above which, on the opposite side of the valley, were a succession of rocky ledges, covered, however, with timber of a luxuriant growth. In spring and autumn the cleared part of the meadow land, whether in grass or young grain, became a noted resort or haunt for the deer found in that district, and they were then very abundant in all the uplands bordering upon the Alleghany river. The usual practice of the hunters was to conceal themselves in the clefts, or behind the loose fragments of the rocks, and there await patiently the approach of their game. On one occasion I had kept my station for some hours to no purpose, when I was induced to desert it, and to proceed into the woods which skirted the upper part of the clearing; but before I had proceeded far into the forest I observed a large buck extended upon the earth with his throat much torn and lacerated; and although the blood was still oozing from the wounds, the poor creature was apparently quite dead. It was evidently the deed of some ravenous beast of prey, for had the animal been run down by the dogs of any of the neighbouring hunters, I must have heard their voices echoing from rock to rock, and from hill to hill. I carefully examined the various passes by which the destroyer might have retreated on my approaching the scene of slaughter, but I could discover no indications of any living creature being in the vicinity, for the surrounding forest was as silent as the tomb. Considering the buck therefore as my lawful prize, and apprehending no danger in taking possession of him, I seized him by his noble antlers with the view of dragging him towards the cleared ground, a little further down the valley, where I intended to skin and quarter him, according to the practice of the hunters of the backwoods. I had proceeded but a short distance with my prize, for it was no easy matter to haul him along, when, stopping to rest for a few moments, and accidentally looking behind me, to my great dismay I beheld an enormous panther moving slowly upon my track. I again moved forward, alternately stopping, however, to observe the motions of my pursuer, and was somewhat puzzled at his audacious

manner, although his movements seemed regulated in a great measure by my own. I then attempted to quicken my pace; the panther did the same, and I now perceived that he began to evince unequivocal signs of disputing my claim to the victim of his fury. I therefore judged it prudent to abandon the object of contention between us, never suspecting for a moment that he had any other motive in pursuing me but the gaining possession of what he might justly consider as his lawful prize; but how great was my astonishment when I beheld the animal pass disdainfully over the dead carcase, with the apparent intention of giving chase to me! Mentally yielding to him the superiority of speed and agility, I sought safety by springing up one of the ledges of rocks, clambering over their ragged points to a height of about eighteen feet, to where a small chasm afforded me a resting place of comparative security. The creature boldly advanced to within about two rods of my retreat, when, falling back upon his haunches, he reconnoitred my position with an eye and front indicative of no pacific or compromising purpose. Becoming convinced that one of us must fall a victim to the other, I raised my rifle, but, I am free to confess, it trembled in my hands like the leaves of the wild poplar tree; and, for the first time during several by-past years, I found it necessary to rest it upon a point of the projecting rock, and bending my body so as to enable me to bring my eye to the level of the gun, I took a deliberate aim at a small bright spot of fur on the animal's breast, and instantly drew the fatal trigger. For a few moments there was an exhibition which might have appalled the stoutest heart; for the death-stricken creature made a prodigious spring towards my foot-hold, and striking the rock two or three yards below me, uttered a cry that I shall never forget; while a stream of blood from his chest, almost resembling the gush of water from the pipe of a small fire-engine, spouted up against the barrier of rocks that protected me. Falling heavily back, he drew in his breath with such force that the blood reverted to his heart with a loud gurgling noise, when he repeated the bound to nearly the same height, with the same terrible yell, and a similar discharge of blood from his death-wound, and again tumbled to the earth, his eyes gleaming with a deadly lustre of crimson. He again sprung forward; and again and again he dashed himself against the rocks, although at each succeeding effort he attained a less elevation, till becoming entirely exhausted from the loss of blood, he spent the last remains of vitality and rage in tearing the earth, and rending with his teeth such objects as chanced to be within his reach. But such was the horrid fierceness that settled in his eyes in the last paroxysms of death, that I felt so much awed that I did not descend from my place of safety until I had discharged a rifle-ball through his head, and saw the dark blood ooze slowly from the orifice.

THE SILK MANUFACTURE.

(Abridged from 'The Progress of the Nation,' by G. R. Porter.)

It is only within the last ten years that the silk manufacture can be said to have been firmly established in this country. Silk goods have, indeed, been made in England since the time of Edward III., and at various times measures intended to act for the protection of the manufacturers have been passed by the legislature. With this view, the importation of silk goods manufactured in other countries was strictly prohibited in 1765, and this system continued in force during a long series of years, such goods being expressly excluded from the benefit of the treaty of commerce concluded with France in 1786.

By this prohibitory law the English silk manufac-

turers were legally secured in the exclusive possession of the home market, from which, in the then imperfect condition of the manufacture, they would have been driven by the superior fabrics of foreign looms. Protected trades are almost invariably carried on without that regard to economy in the processes which is necessary, in order to provide for their extension by bringing the protected article within the reach of a larger number of consumers. Hence it arose that silk goods came to be looked upon as mere luxuries, the use of which must be confined to the richer classes; and this state of things was aggravated by their being thence considered fit objects of taxation. Heavy duties were therefore imposed upon the importation of raw and thrown silk; the manufactured goods made of a material, the cost of which was thus enhanced, continued beyond the reach of the multitude, and the manufacturers were consequently liable to considerable and violent vicissitudes from every change of fashion. On the other hand, those manufacturers feeling themselves secure in their legal monopoly of the home market, were without the necessary stimulus to improvement, and additional temptations were consequently held out to the smuggler to introduce the superior prohibited goods of France.

From the date of the prohibition against the importation of foreign silks, 1765, up to 1824, the silk trade of England was one continued alternation of prosperity and distress. That the former condition prevailed is proved, however, by the increasing amount of the manufacture, comparing one period with another in the course of years. In 1824 the system here described was wholly changed. The high duties of 4s. per pound imposed upon raw silk, and of 14s. 8d. per pound upon thrown silk, were reduced; the former to 3d. and the latter to 7s. 6d. per pound. These rates have since been further reduced; that on raw silk to 1d., and that on thrown silk to 3s. 6d. per pound: a regulation of the Custom-house permits the latter duty to be drawn back upon the exportation of the goods into which foreign thrown silk is converted. At the same time the system of prohibition against the importation of foreign manufactured silk goods was prospectively repealed, and a scale of duties adopted, under which such goods might be imported; but in order to afford the silk manufacturers the opportunity of disposing of their stocks of goods already made, and of otherwise preparing for foreign competition, such importations were not allowed to take place until after the 5th of July, 1826.

An immediate and great increase was made in the consumption of silk goods by this reduction in the cost of the material. Every throwing-mill and every loom was put in constant employment, and a great increase was made in the number of these establishments. The number of throwing-mills in different parts of the country was raised from 175 to 266, and the number of spindles from 780,000 to 1,180,000; yet, notwithstanding this additional productive power, it was not possible for the throwsters to keep pace with the demands of the weavers, who were frequently kept waiting during whole months for silk to enable them to complete the orders which they had in hand.

This full tide of prosperity was checked by the commercial panic which occurred at the close of 1825; and as the admission of foreign-made silk goods first took place during a time of general depression, a great clamour was raised on the part of the home manufacturers against the relaxation, which was said to be the chief, if not the only cause of the distress that had overtaken the trade. This distress, however, soon passed away, so that in the year 1827 a larger quantity of silk was manufactured in this country than had ever before passed in an equal time through our looms. It is not by selecting a single year that a proper judgment can

be formed upon such a subject. In the ten years preceding 1824, the quantity of raw and thrown silk used by our manufacturers amounted to 19,409,020 lbs., being an average of 1,940,902 lbs. per annum; and in the twelve years following the change of system, the quantity used has been 49,973,331 lbs., or 4,164,444 lbs. per annum, being an increase over the average of the former period of 114 per cent.

It is further remarkable that, notwithstanding the great increase in the quantity of silk employed in our looms, the quantity of thrown silk imported has not at all augmented during the last sixty years; but, on the contrary, has of late sensibly diminished. The spur of competition has driven forward the manufacture in both its branches. Improved machinery has been introduced into our throwing-mills, the effect of which has been to lessen by more than one-half the cost of the process; and by the adoption and improvement of the ingenious machinery of Jacquard, our weavers are now enabled to produce fancy goods, the quality of which is, with a few exceptions of little importance, fully equal, and, as regards some sorts, superior, to the quality of goods made in France, although the cost of production is not yet reduced to the level of that country.

When the prohibition to the importation of foreign silk goods was removed, a duty was imposed of 30 per cent. *ad valorem*, which was soon after altered to specific rates per pound, so calculated upon different kinds of goods as to be equal, in most cases, to 30 per cent. upon the presumed value, this rate being assumed as the *maximum* of protection which in any case it was desirable to afford to the English manufacturers. Apart from all considerations of a *maximum* as between the consumers and manufacturers in this country, however, it was found impossible to adopt any higher scale of protection, on account of the encouragement which would thereby be given to smugglers, and, in fact, while arranging the specific duties chargeable on the weight of the goods, it was on this account found necessary to fix the rate upon plain goods on a scale equal to no more than 25 per cent. on the value, while the higher per centage was retained upon other goods, the smuggler's charge on which was higher. The reason why this charge was less upon plain than upon fancy fabrics was this—the latter, being made to answer the immediate demands of ever-varying fashion, were required by the purchasers to be delivered to them without delay, while plain goods, which would be equally valuable at all times, could be kept back by the smuggler to a more favourable opportunity for eluding the government officers.

For some time before and after the opening of our markets to the fabrics of other countries, it was firmly believed and loudly asserted by many persons experienced in the trade, that such a measure would bring certain ruin upon the silk manufacturers of England, who being accustomed to work for only the higher ranks of society, had constantly experienced the evils attendant upon a limited market, and had been kept in dread of competition from without; the successful adventures of contraband dealers having, under such circumstances, been frequently productive of temporary stagnations, which involved the manufacturers and their workmen in distress. The experience of a few years has served to show how groundless were these fears; that by reducing the prices of their goods, which they were enabled to do through the reduction of the duty and the improvements in their machinery, the market would be so extended as to include among their customers by far the larger part of the population; and that, stimulated by the rivalry of foreign manufacturers, such improvements would be effected in the quality of our fabrics, as would fit them for successful competition with the most beautiful productions of foreign looms. It is strictly correct to

assert, that with free permission to import upon a moderate scale of duties, our silk manufacturers suffer less at present from foreign competition, than they did in the days of prohibition, when the quantity of smuggled goods amounted to only a small proportion of that now legally imported. In 1810, when the smuggler's difficulties were increased by the war, the quantity of contraband silks brought into consumption in this country was felt to be so injurious to the manufacturers, that they formed themselves into an association for the prevention of smuggling. Again, in 1818, and the following year, numerous petitions were presented to Parliament by the silk-weavers of Spitalfields and of Coventry, complaining of this illegal competition, and stating that, by means of it, "the demand for manufactured goods had for some time past so decreased, as to afford serious ground of alarm to the manufacturers, and to threaten the existence of the silk manufacture of this country." In one of these petitions it was stated, that operative weavers who used to earn from 30s. to 40s. per week, were at that time able to earn no more than 10s. or 11s.

The fact last stated was by no means peculiar to the time embraced in the petition. The system under which the trade had been regulated for more than half a century had familiarized the country with the complaints of the silk weavers, who were constantly liable, on any change of fashion, to be thrown out of employment; and the high rate of whose wages when fully employed, being unaccompanied by prudent preparation for a fall in wages, only served, by multiplying their wants, to render the reverse the more distressing when it came.

Since the year 1824, when the shackles were removed from the trade, the silk manufacture in all its branches has spread itself into various districts, and is conducted upon a scale and according to principles which admit of so great a degree of economy, as not only to place the products of our silk-looms within the reach of the humbler classes of the community in this country, but to enable us successfully to compete in other markets with goods produced in foreign countries. The declared value of British manufactured silk goods exported from the United Kingdom in each year since 1820, has been as follows:—

1820	£371,755	1828	£255,870
1821	374,473	1829	267,931
1822	381,703	1830	521,010
1823	351,409	1831	578,874
1824	442,596	1832	529,990
1825	296,736	1833	737,404
1826	168,801	1834	636,419
1827	236,344	1835	972,031

It is, perhaps, not the least surprising of the effects which have followed the total alteration of our system in regard to this manufacture, that this country now regularly exports silk goods to a considerable value to France; these exports amounted, in 1832, to 57,187*l.*, in 1833 to 76,525*l.*, and in 1834 to 60,346*l.*, forming two-fifths of the exports made to the whole of Europe. The most considerable part of our export of silks is made to our North American colonies, the West India islands, and the United States of America.

SUSPENSION BRIDGES.

TO THE EDITOR OF THE 'PENNY MAGAZINE.'

SIR,—As constant readers and admirers of the 'Penny Magazine,' we were much gratified with an account of a splendid suspension bridge lately erected at Fribourg in Switzerland (given in No. 279, p. 309); but, in the same article, we were mortified to find a very incorrect account of the suspension bridge at Dryburgh. After describing the

bridge at Merrimack, you proceed to say,—“About the same time (forty years ago!) a bridge suspended by wires was made over the Tweed, near Dryburgh Abbey, the seat of Lord Buchan, in Roxburghshire. The road on this bridge was supported by wires, stretched from different points of it to supports on each side; the span was 240 feet,” &c. &c.

As having erected that bridge, we beg leave to correct this very erroneous account of it.

The bridge was erected in 1817, not of *wire*, but of *iron-rods*, varying from one inch in diameter to half an inch, in proportion to their length. The links were about ten feet in length, and had a welded eye at one end and a hook at the other, which, after being closed upon its fellow, had a small collar put over the point to keep it from opening, thus:



The chains radiated from two points of suspension on each side, and were fixed to the roadway nearly at equal distances. The following sketch will give a better idea of it than any description.—



Plan of the Suspension Bridge erected at Dryburgh in 1817]

The span was the same as that of the present bridge, viz., 261 feet. The end-supports were of wood, and the back-stays were of iron rods, one inch and a-half in diameter, joined in the same way as those already described. The end-supports and back-stays remained firm when the rest of the bridge was blown down. The stays went deep into the ground on each side, and were loaded with masonry; the roadway consisted of joists and cross-planking. Such was the bridge which we constructed for the Earl of Buchan at Dryburgh, in the summer of 1817, at a cost of about 550*l.*, including everything, and which was blown down in January, 1818.

The cause of the failure appeared to be the open hook at the one end of the rod, which, at all the fractures, we found the point drawn through the collar and broken behind, thus:—There was hardly a fracture to be found at any other place, or a welding that had given way. This, as far as we can learn, was the *first* bridge constructed of iron-rods in Britain.



In restoring this bridge, in 1818, we abandoned the hooked joint and the radiating principle, and adopted a simple catenary, consisting of a pair of chains, of iron-rods, on each side of the bridge, about the same length, and one inch and three-eighths in diameter; these have a welded eye at each end, and are joined together by welded coupling links, thus:—



and are hung from the same supports which bore the first bridge, after being strengthened by pieces added to them. The roadway was also restored almost without addition or alteration, and is supported by iron-rods, half an inch in diameter, fixed to the main chain with T heads, thus:—



The following is a sketch of the bridge as it was then erected, and as it now stands.—



[Suspension Bridge erected at Dryburgh in 1818.]

The railing is about three feet high, and trussed as here shown. The main suspending-chains converge towards the centre of the bridge from a base of about eighteen feet to five feet, the breadth of the roadway. It was originally only intended for foot-passengers, but is regularly used for riding-horses also, the passage being too narrow to admit of carts. This bridge has now stood for eighteen years, and the iron-work appears almost as good as at first, and the timber-work is very little wasted.

We would not have troubled you with this communication; but having sent plans and descriptions of the bridge, at different times, to scientific men in various quarters, and having a professional character to support, had your account of the bridge been allowed to pass unnoticed, our veracity might have been called in question. We beg, therefore, that you will have the goodness to correct this mis statement in the Article in question.

We are, with respect, Sir,

Your most obedient Servants,

JOHN and THOMAS SMITH,
Builders, Darnick by Melrose, N B.

ESCAPE FROM WINTER.

By J. G. PERCIVAL, AN AMERICAN POET.

O, HAD I the wings of a swallow, I'd fly
Where the roses are blossoming all the year long;
Where the landscape is always a feast to the eye,
And the bills of the warblers are ever in song;
O, then I would fly from the cold and the snow,
And hie to the land of the orange and vine,
And carol the winter away in the glow
That rolls o'er the evergreen bowers of the line.

Indeed, I should gloomily steal o'er the deep,
Like the storm-loving petrel, that skims there alone;
I would take me a dear little martin to keep
A sociable flight to the tropical zone;
How cheerily, wing by wing, over the sea,
We would fly from the dark clouds of winter away!
And for ever our song and our twitter should be,
“To the land where the year is eternally gay.”

We would nestle awhile in the jessamine bowers,
And take up our lodge in the crown of the palm,
And live, like the bee, on its fruit and its flowers,
That always are flowing with honey and balm;
And there we would stay, till the winter is o'er,
And April is chequered with sunshine and rain—
O, then we would fly from that far-distant shore,
Over island and wave, to our country again.

How light we would skim where the billows are rolled
Through clusters that bend with the cane and the lime,
And break on the beeches in surges of gold,
When morning comes forth in her loveliest prime!
We would touch for awhile, as we traversed the ocean,
At the islands that echoed to Waller and Moore,
And winnow our wings, with an easier motion,
Through the breath of the cedar that blows from the shore.

And when we had rested our wings, and had fed
On the sweetness that comes from the juniper groves.
By the spirit of home and of infancy led,
We would hurry again to the land of our loves;
And when from the breast of the ocean would spring,
Far off in the distance, that dear native shore,
In the joy of our hearts we would cheerily sing,
“No land is so lovely when winter is o'er.”

* * * The Office of the Society for the Diffusion of Useful Knowledge is at
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THE PATAGONIAN PENGUIN.



[Patagonian Penguins.]

THE feathered tribes may be regarded in the whole as creatures formed expressly for flight; furnished with ample wings, consisting of stiff feathers, supported upon the bones of the arms, and arranged so as to overlay each other. Nothing can be more beautiful than the machinery of the pinions of a bird; nothing can bespeak more plainly the end designed by their construction. Firmness, elasticity, lightness, form, and extent, combine to render the wing of a bird all that could be desired as an organ of flight; yet in every group is it so exquisitely modified as to subserve the habits and instincts of its possessor. Look, for example, at the vulture; here we see broad rounded wings, composed of stiff feathers, with close and rigid vanes. Carrion is the food of the vulture: as it lies putrefying on the ground he has to mark it from afar. It is from the upper regions that the vulture perceives his booty. Elevated beyond human sight, he wheels about in vast circles, and on wings stretched out but almost motionless; gazing intently on the map of earth below, he marks his loathsome repast, and descends to it in a series of gyrations, the circle lessening at every turn.

Look again at that hunter of the night, the "mousing owl," as on noiseless wings he wheels around the barn, or threads the lane in quest of his timorous quarry. Here we find the feathers, not only of the body but of the wings, soft and lax, in order that no sound may give notice to the prey of the approach of its destroyer. How well are the long pointed wings of the swallow adapted for rapid flight, and for sudden turns and doubles! How calculated for vibratory movements of extreme rapidity are the wings of the humming-bird; on the contrary, how adapted those of the sea-gull for sweeping, wheeling, and skimming over the wide waste of ocean! As, however, the feathered race vary with regard to the character of their flight, depending upon a modification in the form of the wings, and of the texture or quality of the feathers composing them, so do they vary with regard to their powers of flight, in consequence of the greater or less degree of development in the organs. But this is not all; we not only find the wings so modified as to be unfit for flight at all,—witness the ostrich, rhea, cassowary, emu, and apteryx,—but in some cases we find them absolutely converted into dif-

ferent organs; organs, not of flight, or capable of being used as such, but as oars, or paddles for progression in the water. In some cases indeed we find the wings capable of a short but rapid flight, and also so modified as to assist in diving, as, for example, in the puffin and the razor-bill, and more particularly in the New Holland musk duck, which swims with the whole body submerged; but in other cases flight is denied as a useless gift, and the wings are converted into paddles. Two remarkable instances of this kind are presented; first, by the great auk (*alca impennis*, Linn.), and, secondly, by the bird before us, the Patagonian penguin (*apterodytes patagonica*, Forst.), besides which another genus of penguins (*spheriscus*) exhibits the same modifications.

It is to the Patagonian Penguin, a bird interesting alike for its form and structure, and its curious habits and manners, that we purpose to confine our present observations. The Patagonian Penguin is entirely aquatic in its habits; it is, in fact, expressly formed for the water; its boat-like form of body—its short limbs—its compressed, close, and rigid, or scale-like plumage—its paddle-like wings, and broad, webbed feet, concurring to fit it for its dwelling on the ocean. In birds of flight the bones consist of thin laminae, and those of the limbs are light, hollow, and filled with air directly from the lungs; but the denser medium in which the Penguin pursues its prey, or wanders at pleasure, needs no such contrivance to add lightness to strength. Its bones are solid, hard, and compact; they have no apertures for the admission of air, and those of the limbs contain a thin oily marrow. Again, in birds of flight the keel of the *sternum* or breast-bone is deep, and the *great pectoral muscles* occupy a vast space; but in this bird the space for the attachment of the *middle pectoral muscle* is considerably larger than that for the attachment of the *great pectoral*. The skin is remarkably thick, tough, and oily, reminding us of that of the seal, or other aquatic mammalia. Incapable of flight, the Penguin is very awkward on land; not only are its posterior limbs thrown backwards, so as to occupy the place of the tail (in which arrangement we trace a singular analogy between it and the seal); but the bones of the *pelvis* are also shortened, so that the centre of gravity is in a perpendicular line with the spinal column, and hence the upright attitude of the bird on the shore. In this attitude it is plantigrade; it does not rest on the toes, as we see in birds in general, but on the leg or *tarsal* portion also, (or, more strictly speaking, on the *metatarsus*) the bone of which really consists of three parts, answering to the three toes, but consolidated together at each of their ends. We may here observe, that a very elaborate account of the anatomy of the Penguin, by Mr. Reid, will be found in the 'Zoological Proceedings for 1835.'

Though often alluded to by voyagers and navigators, the manners and habits of the Patagonian Penguin have been very imperfectly understood. Its range of habitation is restricted to the latitudes south of the line, but within this boundary it is widely distributed, being abundant not only in the Straits of Magellan, and on all the adjacent islands, but extending to Australia, through the islands of the South Pacific. If Clusius be right, the first discovery of these birds was by the Dutch, in 1598, who met with them on some islands near Port Desire, to which they came in order to breed; and the sailors called them Penguins, or Pingouins, and the islands the Penguin Islands. "These singular birds," adds Clusius, "are without wings, having in their place two membranes, which hang down on each side like little arms; their neck is thick and short—their skin hard and tough, like that of a hog,—the young weighed ten or twelve pounds, but the old ones about sixteen, and their size was generally that of a goose." Forster, however, measured some thirty-

nine inches long and thirty pounds in weight; he remarks, that they were met with in troops on New Georgia, and that such was their stupidity, that they allowed themselves to be approached, so that the sailors knocked them down with sticks—(see 'Second Voyage of Captain Cook,' vol. iv.) Bougainville, who met with them in the Falkland Isles, observes that they love solitary and remote spots; he also well describes their colour, and notices an attempt made to tame one and bring it to Europe, but for want of proper food it became meagre and died. Beyond the facts, however, that they associate in vast bodies, sitting upright on the beach, in close array; that they are destitute of the fear of man, in lonely islands where man had never been before; and that they are incapable of flight, we gain but little positive information from the relations of the earlier navigators. Fortunately, more attention is now directed to natural history than formerly; and several individuals have recorded their personal observations on the habits of the animals met with on their journeys and voyages, to say nothing of naturalists who expressly travelled for the purpose of acquiring knowledge in this department of science. In the 'Zoological Proceedings for 1835' is an account of the Penguin, by Mr. G. Bennett, which we shall take the liberty of transcribing. This able naturalist, to whom science is indebted for many original observations, and whose work, entitled 'Wanderings,' &c., is well known, paid much attention to the *Patagonian*, or *King Penguin*, which he met with in various islands in the high southern latitudes; and he describes particularly a colony of these birds, which covers an extent of thirty or forty acres at the north end of Macquarrie Island, in the South Pacific Ocean.

"The number of penguins collected together in this spot is immense, but it would be almost impossible to guess at it with any near approach to truth, as, during the whole of the day and night, 30,000 or 40,000 of them are continually landing, and an equal number going to sea. They are arranged, when on shore, in as compact a manner and in as regular ranks as a regiment of soldiers; and are classed with the greatest order, the young birds being in one situation, the moulting birds in another, the sitting hens in a third, the clean birds in a fourth, &c.; and so strictly do birds in similar condition congregate, that should a bird that is moulting intrude itself among those which are clean, it is immediately ejected from among them.

"The females hatch the eggs by keeping them close between their thighs; and, if approached during the time of incubation, move away, carrying the eggs with them. At this time the male bird goes to sea and collects food for the female, which becomes very fat. After the young is hatched, both parents go to sea, and bring home food for it; it soon becomes so fat as scarcely to be able to walk, the old birds getting very thin. They sit quite upright in their roosting-places, and walk in the erect position until they arrive at the beach, when they throw themselves on their breasts in order to encounter the very heavy sea met with at their landing-place.

"Although the appearance of penguins generally indicates the neighbourhood of land, Mr. G. Bennett cited several instances of their occurrence at a considerable distance from any known land."

The observations of Mr. Bennett are confirmed by Lieut. Liardet, from whom was obtained the specimen dissected by Mr. Reid*. They assemble on the shore, herd together in vast bodies, forming a dense phalanx, all moving and acting in concert together;—one party going off to sea,—another party returning,—another

* This specimen was captured at East Falkland Isle, in latitude 51° 32' south.

remaining in array on the beach. They appear to be very peaceable among each other, but are sometimes observed to fight, striking with the posterior edge of the wing. Should a person attempt to lay hold of them, they not only use their wings, but their beak, which is a far more formidable weapon, and capable of inflicting a severe wound. Cuttle-fishes appear to constitute the greater part of their food; in the stomach of the specimen dissected was found a considerable number of the horny parrot-like beaks of these molluscous animals. Their mode of walking is very singular; it is a sort of awkward waddle, the body turning with the action of the limbs in motion, which cross each other alternately;—it is, in fact, an “over-handed” mode of progression, if the word be allowed, producing a strange and ludicrous effect. We see a tendency to it in the waddle of the duck and other swimming-birds. During the period of incubation the females all assemble together, sitting upright on a kind of general nest, of loosely-arranged sticks, which they carry to the selected spot in their bills, and flourish if then approached, as if in defiance of the intruder on their secluded haunt. They lay but one egg, of a whitish colour, and twice the size of that of the goose; this they carry between their thighs, supporting it beneath by the short stiff tail, which is bent underneath it. The young are covered with thick soft down, of a brownish grey; in this state the bird is the Woolly Penguin of Latham, which must not be regarded as a distinct species, but as the King Penguin in nestling plumage. At night they utter loud moaning noises in concert, the general chorus of voices resounding to a great distance, and clearly distinguishable from the roar of the surf or lashing of the waves. The flesh of the penguin is rank, and unfit for food; both the muscles and bones are oily, and the skin is lined with a thick layer of oleaginous fat; yet more than 500 were taken in New Year’s Island (near Staaten Island), as food for the crew, by the sailors in Captain Cook’s ship (Last Voyage, vol. i.), who found them occupying that spot in thousands.

There is something in the strange figure and aspect of the penguin well agreeing with the wild, lonely, remote islands in which it congregates. In beholding a spot on the surface of our globe, ocean-girt, and uninhabited by man, tenanted by thousands of these birds, which for ages—generation after generation—have been the uninterrupted occupiers of the place,—we are thrown back upon primeval days; and we involuntarily recur to the now-extinct dodo,—a wingless bird, which formerly tenanted the islands of Bourbon, Mauritius, and Rodrigue, once desolate and untroudden by the foot of man, as are still many of the haunts of the penguin,—and the idea forces itself upon us, that, like the dodo, this bird also may, at some future time, become utterly annihilated.

The penguins occupy in the southern ocean the place of the auks in the northern, where they are more especially represented by the great auk (*alca impennis*); their wings, however, are even less developed than in that extraordinary bird. At first sight the wings of the penguin seem as if covered with scales, the feathers being short, rigid, and disposed in scale-like order; the advantages arising from this adaptation of wings to the purposes of oars, in a bird so thoroughly oceanic in its habits, must be very evident; for in swimming the penguin is so much immersed, that the head and neck alone are elevated above the surface: aided by these paddles and its webbed feet, the course of the penguin is extremely rapid, and it is even capable of springing, by a sudden exertion, several feet out of the water, so as to clear any obstacle in its way, and again continue its course.

The general plumage of the penguin is short, close,

glossy, compact, and water-proof; the bill is long, slender, and somewhat bent at the tip; a longitudinal furrow runs along each side of the upper mandible, down which the feathers of the forehead proceed to a considerable distance, entirely concealing the nostrils. The feet consist of three toes, with intervening webs, but a fourth rudimentary toe is seated above the base of the first or inner toe on each foot. The eye is small, viewed externally; but its globe is really large, and it is furnished with a strong *membrana nictitans*.

The height of the specimen before us is upwards of three feet; its colours are beautifully disposed and contrasted. The bill is black, except the base of the under mandible, which is rich reddish purple, with a plum-like bloom, gradually merging into dusky and ultimately into black. The top of the head and throat are black, bounded by a belt of fine pure golden yellow, which commences broad on the sides of the head, and becomes narrow in its progress as it runs down to the middle of the neck, where it passes onwards till it blends with the silvery white of the under surface. The colour of the upper surface of the body and paddles is glossy bluish grey; each feather, if examined, being dusky black margined with bluish grey—and it is from the overlapping of the feathers on each other that one uniform tint is produced. The tail, which is short, and indeed can scarcely be called a tail, consists of slender stiff elastic feathers, bent under the bird, as it sits up on the shore.

How different the wing of the penguin from the wing of the vulture—how different its use! Here we find no arrangement of quill-feathers and coverts; but the limb, broad, short, stiff, and flattened, is covered with minute stiff hairy feathers, disposed in scale-like order, and so close as to produce a uniform surface, having the feel of plush or velveteen. No longer an instrument of flight, it is now a paddle, aiding the bird in its aquatic course; and for diving and winding beneath the surface of the water in the chase of its prey.

AGRICULTURE, GARDENING, &c. OF CHINA.

FROM the vast population of the Chinese empire, and the very restricted nature of their commerce, it becomes necessary that the greatest attention be paid to the pursuits of agriculture.

That valuable science, by which bad lands may be rendered susceptible of cultivation, and good ones to increase and vary the produce for the support of man, has been made matter of high eulogium, as it is possessed and acted upon by the Chinese. We will endeavour to show to what extent this praise is merited, and in what the agricultural labours in China are ingeniously conducted, or otherwise.

The government has, from very remote times, had the merit of respecting and honouring the tillers of the soil, and of rewarding those who improved agriculture with the highest distinctions. In the ranks of society the husbandman, taking precedence of soldiers, merchants, artisans, and others, stands next to the man of letters or state officer. Both the soldiery and priesthood, whenever the service of the former permits*, and whenever the establishments of the latter are endowed with lands, are practical agriculturists. Even the emperor himself, “The Son of Heaven” in their parlance, at the vernal equinox, after a solemn offering to the God of Heaven and Earth, repairs to the fields, ploughs a few ridges of land, and casts in the fructifying seed. Several of their emperors have, moreover, written vo-

* Every soldier stationed on the different guards by the great wall and elsewhere, has his portion of land assigned to him, which he cultivates, and pays his quota of the produce to the state.

lumes on the subject; and in the theory of their government, it is *supposed* that every mandarin departing for a government is well acquainted with this first of sciences, and always ready to give it his attention in the province or district to which he is nominated. In their very numerous and voluminous works on agriculture (some of which are of great antiquity) it is always styled "the grand science of the citizen and of the prince."

In the 'Memoirs concerning the Chinese,' vol. xi., there are full translations of two government documents, addressed to all *Tchi-hien*, or governors of cities of the third class, which prove at least the anxious attention paid to the subject of cultivation. These papers insist that the first care of the governors ought to be to study well the map of the district submitted to their authority, to learn the nature of all the lands, their produce, and the good and bad qualities of the inhabitants. Then they must see that no persons remain idle; and no grounds, particularly such as are productive of corn or rice, remain untilled. They are instructed to consult farmers on farming—gardeners on gardening. Except where wanted for fuel, they are to see that the mass of trees planted be fruit-trees, and such as will give fruit that may afford nourishment in case of a scarcity of grain, as chestnuts, &c.

In the second of these government instructions are, among several others, the following judicious remarks:—

"It has long been known that many plants, vegetables, roots, and fruit-trees, that afford nourishment to man, degenerate in some places, and only retain their beauty and goodness for a certain number of years. These must be renewed by roots and seeds, by engrafting, and by plants brought from other places; sometimes from another district of the same province, but sometimes from a different and even a distant province. Few of the people in your villages can think of this; and they would think in vain, because they are not in a state to support the expense, and generally would not know where to turn, or to whom to address themselves." The governors are, therefore, to take this upon themselves, and to engage the rich to follow their example. The private advantages of so doing are thus impressed:—"Can anything be so good for presents of ceremony and friendship—anything so ornamental and delicious at their tables—and, *above all*, anything so acceptable an offering in the sacrifices to their ancestors, as fine fruit?"

They are instructed, however, not to keep to themselves, but to disseminate among the people, these plants and improvements. "It is only by distributing them among all persons that have good gardens and industry that the full success of these importations can be assured; and this on account of the difference of soils and methods employed, and of the emulation which will be excited among the different cultivators."

In another place government insists on the enlightened and unalterable principle, that "the more the cultivator is permitted to enjoy life and the produce of his labour, the more agriculture will flourish;" and the mandarins are commanded to treat this class with lenity and forbearance. Unfortunately it is admitted that the practice of the men in employment is too often at variance with the humane theory of government, and that the peasants are cruelly ground by the mandarins. It is one thing to make laws and another thing to see them observed, in so vast an empire; but still we must leave to many of the Chinese emperors the merit of good intention—a merit, on this particular point, not always possessed by the governments of Europe, and scarcely ever found in the despots of the East.

Many of the Chinese treatises on agriculture enter into minute considerations as to the proportions of lands

that ought to be kept for corn or rice, or laid out in gardens or meadows, or planted with underwood for fuel, or with timber-trees, always taking into account the number of agricultural labourers, and the hands to be procured from other districts.

One of their writers explains how the lands divided among the peasantry were always in a better state of cultivation than the royal domains and those in possession of the great lords of the court. He also relates that when the enlightened Emperor *Kang-hi* was made to understand how a private individual derived more from a single farm than he drew from many estates in the same province, he conceived the grand project of leaving to the people all that he could of his domains, that they might produce the more for the general advantage of the state.

The barometer and thermometer, those invaluable instruments to the agriculturist, are unknown to the Chinese. Meteorological journals have, however, been kept for centuries. These were formerly always in the possession of the public officers who superintended cultivation, but their contents are said to be now pretty generally disseminated. There are also many agrarian calendars published from time to time, and the farmers have been observed to have a good knowledge of weather, the course of the seasons, &c.

"Know your weather! Know the proper season for sowing, planting, transplanting, and reaping, and miss it not," is a sentence continually occurring in their treatises on agriculture.

Many of their old poets have detailed with great precision all that was known about the productions of the earth and other branches of natural history in their time.

The emperor is the universal land-owner—the sole proprietary of the soil; but the tenant is never liable to be dispossessed, if he regularly pay his rent to the crown, which is calculated at about one-tenth of the produce of the farm or farms. In case any agriculturist have more land than he and his family can cultivate, he lets it to another, on condition of receiving half the produce, out of which he pays the whole of the emperor's taxes. On these terms land is cultivated by the greater part of the poor peasantry.

The Chinese have the advantages and the disadvantages attending the non-existence of great farms. There are in fact no great farmers. Every grower carries his own limited produce to an open and a free market—and yet scarcity and famine are not unfrequent occurrences in one province or other of this empire. In the days of Marco Polo these casualties were provided for by the establishment of imperial granaries, which he thus describes:—

"In times of great plenty the emperor causes large purchases to be made of such kinds of grain as are most serviceable, which is stored in granaries provided for the purpose in the several provinces, and managed with such care as to ensure its keeping for three or four years without damage. It is his command that these granaries be always kept full, in order to provide against times of scarcity; and when, in such seasons, he disposes of the grain for money, he requires for four measures no more than the purchaser would pay for one measure in the market."

This establishment still exists indeed as at the time of the Venetian traveller, but it appears from De Guignes and Barrow, and other recent authorities, that the supplies are not only insufficient in themselves, but badly administered, owing to the want of alacrity and honesty in the mandarins who are charged with their distribution*.

* Ellis.

THE CASTLE AND GREAT TUN OF HEIDELBERG.



[View of Heidelberg from the ruins of the Castle.]

IN a preceding Number of the 'Penny Magazine' we gave a view of Heidelberg Castle and town, with a short historical description of both. To these we will now add a second view of that most picturesque town, taken from another point, and a few notes descriptive of objects not before touched upon.

The popular wonder of the place, and for which it is celebrated throughout Germany and the neighbouring countries, is a wine tun of large dimensions, called emphatically "The Great Tun of Heidelberg." This monument of old times and good drinking (for in days of yore it used to be filled with the best Rhine wine) is preserved with religious care in a building in the castle, being placed under the protection of a worthy man, dignified with the title of "The Cooper of the Castle," who gains a good livelihood by showing it to admiring visitors. The women of Heidelberg look upon the tun as one of the wonders of the world; and our countryman, that very eccentric traveller, Thomas Coryat, who visited it some 230 years ago, seems to have been scarcely less impressed with its magnificence.

* * * * *

"For it is the most remarkable and famous thing of that kinde that I saw in my whole iourney; yea, so memorable a matter, that I thinke there was never the

like fabrick (for that which they showed me was nothing else than a strange kinde of fabrick) in all the world, and I doubt whether posterity will ever frame so monstrously large a thing: it was nothing but a vessel full of wine, which the gentlemen of the court showed me after they had first conueighed me into divers wine-cellers, where I saw a wondrous company of extraordinary great vessels, the greatest part whereof was replenished with Rhenish wine, the totall number containing 130 particulars. But the maine vessel above all the rest, that superlative moles (mass) vnto which I now bend my speech, was shewed me last of all, standing alone by it selfe in a wonderfull vast roome. I must needs say I was suddenly strooken with no small admiration vpon the first sight thereof. For it is such a stupendious masse (to give it the same epitheton that I have done before to the beauty of St. Mark's Street in Venice), that I am perswaded it will affect the greatest and constantest man in the world with wonder. Had this fabrick beene extant in those ancient times when the Colossus of Rhodes, the Labyrinths of Egypt and Creta, the Temple of Diana at Ephesus, the hauging gardens of Semiramis, the Tombe of Mausoleus, and the rest of those decantated miracles did flourish in their principall glory, I thinke Herodotus and Diodorus

Siculus would have celebrated this rare worke with their learned stile as well as the rest, and have consecrated the memory thereof to immortality as a very memorable miracle. For, indeed, it is a kinde of monstrous miracle, and that of the greatest sise for a vessell that this age doth yeeld in any place whatsoever (as I am verily perswaded) vnder the cope of heaven. Pardon me I pray thee (gentle reader) if I am something tedious in discoursing of this huge vessell: for as it was the strangest spectacle that I saw in my travels, so I hope it will not be vnpleasant vnto thee to reade a full description of all the particular circumstances thereof; and for thy better satisfaction I have inserted a true figure thereof in this place (though but in a small forme), according to a certaine patterne that I brought with me from the City of Frankford, where I saw the first type thereof sold. Also I have added an imaginary kinde of representation of my selfe vpon the toppe of the same, in that manner as I stood there with a cup of Rhenish wine in my hand. The roome where it standeth is wonderfull vast (as I said before) and capacious, euen almost as bigge as the fairest hall I haue seene in England, and it containeth no other thing but the same vessell. It was begunne in the yeare 1589 and ended 1591, one Michael Warner, of the City of Laudacica, being the principall maker of the worke."—'Coryat's Crudities,' vol. ii., p. 351—353.

The dimensions Master Coryat gives are "sixteen foot high (*that is, in diameter*), and at the belly eighteen," so that after all this wonderful tun is nothing compared to some of our porter vats in London.

Another marvel of the place, most interesting to the honest peasants who for the first time climb up to the old castle, is a confessional in the now bare and deserted chapel. Within that niche there sits a pale old monk, so like to life, that it is only on a close approach they can discover he is made of wax! The good woman who shows the place rejoices day after day in the perfectness of the deception. But the castle has higher claims to attention than these. In a room over the great gateway there is a curious collection of pictures, consisting almost entirely of portraits of the princes and princesses of the palatinate, to whom the castle has at different periods belonged—melancholy memorials of by-gone pomp and power, quite in harmony with the ruin and desolation around. Many parts of the castle record the name, or otherwise recall the melancholy history, of the Princess Elizabeth of England, the daughter of James I., married to the Palatine Frederic V. Over a noble archway leading to a fine open terrace, the following simple and touching inscription is still legible:—"Frederic the Fifth to his dear wife Elizabeth, in the year 1615."

The great tower of the castle, which is round, and of prodigious dimensions, is connected with the buildings containing the chapel by a simple but noble range of apartments, still called the "English Buildings." They were erected by Frederic for the especial use of his wife Elizabeth. Beneath the windows of this immense tower are the statues of the two princes that founded it, with a stone tablet between them, stating that Lewis V. erected and finished the tower in 1583, and Frederic V. improved it, and added thirty-three feet to the height of the banqueting-hall within it in 1619. This said hall, which is now hung with ivy and inhabited by the bat, was famed for its magnificence, and the hospitality of which it was the scene. The two statues, which peep forth from the ivy that has crept round their niches, are most highly finished, and give a perfect notion of the costume of the times. This high finishing, indeed, is common to all the ornaments and accessories of the castle, which are innumerable, and distinguish it from all other ruins of the kind. The corbels and cornices,

—the caryatides and friezes,—are everywhere finished with the minutest care; and these, with many parts of the immense range of buildings that remain almost entire, afford an almost inexhaustible mine of study to the artist, and the architect above all. The most valuable drawings that have been made of the castle are entirely architectural. A living artist is said to have devoted more than twenty years of his life in making drawings and superintending engravings of all the most interesting parts; and, as yet, it is added, his work is incomplete. The façade of that part of the building, or collection of buildings, which is called, after its founder, the "Palace of Otho Henry," is superb, and ornamental in the extreme. In the interior of these quadrangles and tenantless chambers are sundry statues (the works of the fifteenth century), representing personifications of the spiritual virtues, and persons of scriptural and pagan history and mythology, all brought together:—Samson, David, Hercules, Hope, Faith, Saturn, Mars, Antoninus, Tiberius, Nero, &c., &c. Another highly interesting portion is what is called the "Library Tower," within which there is a splendid chamber, now roofless, and carpeted with a green grass-turf, that once contained the library of the Palatinate,—one of the richest collections then in existence. The views from the windows of the chamber down the steep sides of the castle-hill, over terraces, gardens, and groves, and then on to the town of Heidelberg,—and the clear, flowing river, and the valley of the Neckar, and the hills beyond it,—are surpassingly beautiful. But whichever way you turn in these elevated ruins the prospect is enchanting: every tower,—every terrace,—every rent in the wall or chasm in the rock,—affords a view of its own, the variety and different combinations being extreme. In one direction the guides point out the romantic little village of Neuenheim, and a humble antiquated house which is said to have sheltered Luther in 1521, on his hasty retreat from the Diet of Worms.

The architecture of the most modern parts of the building, which is that erected by Frederic IV., is of the pointed florid description, introduced into England during the reign of James I., when the attendants of his daughter, the Princess Elizabeth, probably borrowed it from this spot. But the rambling and immense masses of building here present almost every variety of style, from that of the rude mountain-fortress of the fourteenth century to the highly-decorated palace of the seventeenth.

As it was built in different ages, so has Heidelberg Castle fallen into decay from time to time, and part by part. Time, war, and tempest, have all assisted,—but the progress of destruction seems to have been most rapid during the last century and a-half. Several of the buildings were injured in the course of the Thirty Years' War; but the main causes of its ruin were two bombardments it suffered from the French under Turenne and Melac, by the cruel orders of Louis XIV.,—on which occasion a 'Te Deum' was sung at Paris, and a medal struck, with the inscription, "*Rex dixit, et factum est.*"

Lightning, which had struck it several times before, was the final cause of its abandonment and desolation. After the dreadful ruin occasioned by the French in 1692, the Electors had done much to restore it, and the reigning prince, Charles Theodore, had formed a plan for its entire restoration to its ancient splendour, when (in 1764) it was again struck, and so much injured as to make the undertaking almost a hopeless one. The Prince transferred his residence to Mannheim, and ever since the castle has been left to a gradual decay.

PAWNBROKING ESTABLISHMENTS IN ENGLAND AND ON THE CONTINENT

At the recent meeting at Bristol of the British Association for the Advancement of Science, the attention of the members of the statistical section was directed to the best means of obtaining facts illustrative of the moral condition of the poorest classes of society; and the conclusion appears to have been that an accurate return of the number and nature of articles pledged in pawnbrokers' shops would throw great light on the subject. One of the members read a return furnished by Dr. Cleland, of Glasgow, from one of the largest pawnbroking establishments in that city. It was stated that women more frequently had recourse to this mode of raising money than men. The following is a list of the articles which had been pledged:—539 men's coats, 355 vests, 288 pairs of trowsers, 84 pairs of stockings, 1980 women's gowns, 540 petticoats, 132 wrappers, 123 duffles, 90 pelisses, 240 silk handkerchiefs, 294 shirts and shifts, 60 hats, 84 bed-ticks, 108 pillows, 262 pairs of blankets, 300 pairs of sheets, 162 bed-covers, 36 table-cloths, 48 umbrellas, 102 bibles, 204 watches, 216 rings, and 48 Waterloo medals.

There are above thirty pawnbroking establishments in Glasgow, and assuming that each of them only does half as much business as the one from which the above return was obtained, the articles enumerated, if multiplied by fifteen, will show in a striking light the extent to which a large number of people are in the habit of resorting to temporary expedients for raising small sums of money. Owing to the habits of the people of this country, and the popular dislike of too minute an investigation into private affairs, it is not probable that anything more than an approximation as to the general business carried on by pawnbrokers will be easily obtained. On the continent, where establishments of this kind are conducted by the servants of the government, it would not be difficult to give an accurate view of their transactions. The Statistical Tables recently published by the French Minister of Commerce, show the operations which took place in those of Paris and several of the large towns during the year 1833; and an analysis of them will at least assist any speculations as to the extent of the transactions in pawnbroking establishments in Great Britain.

The number of articles pledged in Paris in 1833 was 1,064,068, at an average of 14s. 11d. for each. The number of articles redeemed, on which the interest was paid, was 844,861; and the repayment of the sums advanced, with the interest thereon, amounted to 548,282*l.* On 178,913 articles the interest was paid, and a new ticket being obtained, they were allowed to remain in pledge until the owners were enabled to redeem them. The total sum advanced upon articles thus pledged a second time, without being taken out of pawn, amounted to 179,778*l.*; and 50,656 articles, on which the sum of 36,391*l.* had been advanced, were sold, the parties not having been able to redeem them at the expiration of the usual term. It appears, therefore, that between one-fourth and one-fifth of all the articles pledged could not be disengaged at the end of the year, and the owners of them were compelled to make further sacrifices by the payment of interest, in order to preserve a nominal right over them; and further, that one-twentieth of the total number of articles pledged, taking the year 1833 as the average of ordinary years, never revert to their former owners. At Metz, in the same year, the unredeemed articles formed one in thirteen of the total number pledged; at Strasbourg one in nineteen; Lyons one in twenty; Dijon one in twenty-one; Rouen and Bordeaux one in twenty-two; Brest and Besançon one in twenty-three; Nantes one in twenty-five; Nismes one in twenty-seven; and Marseilles one in twenty-nine. The number of articles pledged in these

eleven places was 751,086, and the amount advanced was 312,170*l.* The number of articles redeemed was 556,775, and the sums advanced upon them amounted to 258,004*l.*; and 31,140 articles, on which the sum of 12,704*l.* had been advanced, were sold, being unredeemed. The average sum advanced upon each of the above 751,086 articles was 8s. 3 $\frac{3}{4}$ d., being not much more than half the average value of those pledged in Paris. The average value varied in different places, being only 4s. 10d. at Strasbourg, and 19s. 8d. at Nismes; and in the remaining towns as follows:—Besançon 7s. 5 $\frac{1}{2}$ d.; Rouen 8s. 1 $\frac{1}{2}$ d.; Metz 9s. 1d.; Bordeaux 10s. 10d.; Nantes 12s. 0 $\frac{1}{2}$ d.; Brest 12s. 1d.; Lyons 12s. 10 $\frac{1}{2}$ d.; Dijon 15s. 4 $\frac{1}{2}$ d.; and Marseilles 17s. 1d. In Brest, Nismes, Dijon, and Nantes, the value of each of the unredeemed articles exceeded the average value of the total number of articles pledged. The population of the arrondissement, in which Strasbourg is situated, amounts to 205,029; number of articles pledged 125,078, at an average of 4s. 10d. upon each, as already stated. The population of Nantes and its arrondissement also amounts to 205,627, but the number of articles pledged was only one-fifth of the number pledged at Strasbourg, being 25,316, of the average value of 12s. 0 $\frac{1}{2}$ d. each. The proportion of the urban to the rural population is about one-half at Nantes, and one-fourth at Strasbourg. Here, at least, are the elements of some striking inferences as to the character and condition of the respective population of these capitals of the east and west of France. At Rouen the number of articles pledged was as nearly as possible the same as at Strasbourg, being 125,111, of the average value of 8s. 1 $\frac{1}{2}$ d. each. The population of the arrondissement of Rouen is 225,996, and the urban population forms considerably more than one-third of the whole. Strasbourg and Rouen are manufacturing places, and this may account in some degree for the greater number of persons who have recourse to temporary expedients for raising money; but Lyons, where the manufacturing population is much larger in proportion, and where the total population of the arrondissement is also nearly one-third greater than that of Rouen or Strasbourg, falls short of these places in respect to the number of transactions at pawnbrokers; the number of articles pledged being 88,112, and the average value of each article 12s. 10 $\frac{1}{2}$ d.

It has been stated that the pawnbroking establishments on the continent were under the immediate control of government. They are called "Monts-de-Piété;" and from a brief account of the history of their introduction, recently given in a paper read by Rawson W. Rawson, Esq., before the Statistical Society, the following information concerning them is taken:—

"They were first established in Italy,—were supported by the donations of charitable individuals, and no interest was required for the sums lent; but in 1521, Pope Leo X., with the view to promote their further extension, allowed interest to be paid upon the sums advanced for their support. It was not, however, until two centuries and a half afterwards that an institution of the same nature took root in France, the first being established in Paris in 1777, though several had previously existed in the provinces annexed to that country by the peace of Aix-la-Chapelle. By letters patent, passed in that year, the Paris institution was placed under the government of the Lieutenant-general of Police, and of four of the directors of the General Hospital at Paris, with which it was incorporated. A Director General was appointed to conduct its management, its finances being placed under the control of four Counsellors of Parliament, and a nominee of the Procureur-Général: the rate of interest to be paid by parties borrowing was fixed at 10 per cent. per annum. As the institution could not

be supported without funds, and as the small means which the General Hospital had at its disposal were soon exhausted, fresh letters patent were passed authorizing the directors to raise a loan of 4,000,000 of francs at 5 per cent.; but owing to the public funds offering at that time greater advantages, they were unable wholly to effect this object. The total amount required by the institution was 10,000,000 of francs (400,000*l.*), and the deficiency was at length raised upon bills paying 6 per cent., and the simple acknowledgment of the Director-General; and by these means it continued to flourish, attaining a high degree of prosperity, until overwhelmed by the events of 1789, which destroyed its means of support. In 1797 it was again restored, the necessary funds being raised by the creation of 1000 debentures of 10,000 francs each, subdivided into shares of 2000 francs. The shareholders were entitled to half the profits, the remainder being applied to the use of the hospital. The establishment now resumed its former activity, and public confidence increased so rapidly that the rate of interest upon money borrowed by the directors had fallen from 18 per cent. in 1800, to 7 per cent. in 1804. The interest charged upon the sums lent in pledge was likewise proportionately reduced: in 1795 it was no less than 5 per cent. per month (the time to which the loans were then limited); in 1800 it was $2\frac{1}{2}$ per cent.; and in 1804 it had been reduced to $1\frac{1}{4}$ per cent. In the latter year a law was passed enacting that no establishment for lending money upon pledges should be founded except for the benefit of the poor, and by the authority of the government; since that period, similar institutions have been established in most of the principal cities of France. The following are the terms upon which the business of the Paris establishment is at present conducted. Loans are made upon the deposit of such goods as can be preserved, to the amount of two-thirds of their estimated value, but on articles of gold and silver four-fifths of the value is advanced. No loan is made for less than 3 francs. The average sum advanced on each deposit in 1833 was 17 fr. 93 c. The advances are made for a year, but the engagement may be renewed. The present rate of interest is 1 per cent. per month, or 12 per cent. per annum. The Paris establishment has generally from 600,000 to 650,000 articles in its possession, which, at the lowest average of 18 francs for each article, would exhibit a constantly outstanding capital of 11,000,000 francs, or 440,000*l.*, although 500,000*l.* sterling would probably be nearer to the truth. The expense of management amounts to between 60 and 65 centimes for each article; so that a loan of three francs does not defray the expenses which it occasions, and hence the profits are wholly derived from those of five francs and upwards. At Paris, articles not redeemed within the year are sold, subject, however, as in England, to a claim for restoration of the surplus if made within three years. The annual profits of this institution amount on an average to 155,000 francs, but it is stated to possess an additional income of 125,000 francs, arising from other sources. The greatness of the differences in the average amount advanced on each article in Paris and the different provincial towns, suggested to the author the belief that the systems followed are not uniformly the same; and this he considered to be corroborated by the fact, that the annual number of deposits is much greater in the places where the average is low, than can be accounted for by any difference of population or other causes." After referring to the statistical documents published in France by the Minister of Commerce, from which the previous statements were taken, he concludes by remarking that Monts-de-Piété are numerous in Belgium, and are said to exist in most of the chief towns of that kingdom.

In this country there are several acts of Parliament

for regulating the business of pawnbrokers, and they pay an annual licence for permission to continue their calling, but beyond this there is no interference or investigation. The pawnbrokers of the metropolis pay 15*l.* for their annual licence, and those in every other part of Great Britain only one-half of this sum; but the pawnbrokers of London nevertheless amount to more than one-fourth of the whole number. The number who take out 15*l.*-licences for London is 380; 1096 take out a licence of one-half this value for other parts of the country; and 61 licences are taken out for Scotland. These licences produce 14,570*l.* per year; and the number of establishments licensed in Great Britain is 1537. There are no means of ascertaining the exact number in each of the large towns in England; but the Population Returns give the number of males of the age of twenty years and upwards who are employed in pawnbrokers' establishments; and this information, compared with the number of licences taken out, will afford some idea, though in some cases perhaps not a very accurate one, of the number of separate establishments in different places. The number of males above the age of twenty thus employed is stated to be 107 at Manchester; 91 at Liverpool; 54 at Birmingham; 33 at Bristol; 31 at Sheffield; and only 11 at Leeds; though there is probably some omission in the latter place.

If the average net profits of the 1537 pawnbroking establishments amount to 450*l.* each, this gives an income of 701,650*l.* per annum. As the number of articles pledged annually in Paris exceeds 1,000,000, it is probable that London, with twice the population, would furnish double that number; and, taking the average value of the articles to be equal to those of Paris, the sum advanced upon them during one year would exceed 1,500,000*l.* The rate of interest on any sum, however small, is a halfpenny for any period under one month. As an immense number of the articles pledged are of small value, and are repeatedly taken out and brought back by persons who have fallen into the habit of depending upon such resources, the profits of an extensive establishment are necessarily very great. A calculation has been made that a loan of 3*d.*, if redeemed the same day, pays annual interest at the rate of 5200 per cent.; if weekly, 866 per cent.

4 <i>d.</i>	3900	650
6 <i>d.</i>	2600	433
9 <i>d.</i>	1733	288
1 <i>s.</i>	1300	216

Articles of the value of 20*s.*, if allowed to remain one year, pay interest at the rate of 20 per cent. The practice is, therefore, most ruinous, and is the dearest of all possible means of obtaining money. It is lamentable to think that a sum, amounting every year to probably nearly 750,000*l.* sterling, should be sacrificed in the greatest number of cases to provide the means of some momentary and unprofitable gratification, or, at best, to meet the exigencies which a little foresight and management would have prevented. Undoubtedly, there are cases in which these establishments silently furnish the means of relief to the truly unfortunate, in a manner probably less distressing than other modes; but the practice, when once it becomes habitual, is most pernicious. The facility of pledging the most trifling articles is attended with many evils, but it is difficult to perceive that they would be obviated by any direct impediment thrown in the way of such transactions. Any demoralization which arises from the facilities afforded by respectable and authorized establishments can only be corrected in an indirect manner, by enlightening the people concerning their true interests, and by endeavours to elevate their moral notions.

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294.]

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THE CASTLE OF NEWCASTLE.



[Chapel in Newcastle Castle.]

The Norman Conquest roused England from a state of apathy, in which she was incapable of making any great forward movement in arts or arms or social good; but the qualities of the Norman mind, when combined with the characteristics of our Saxon ancestors, con-

tributed to the formation of a national spirit which has been one of the essential causes of the uninterrupted progress of the people. External circumstances, acting upon the national character during successive centuries, have left their impress upon the features of many of the

prevailing objects around us. Even the occasional notices which have been given in this Magazine in illustration of the ruins of castles, abbeys, and monastic establishments, which were once scattered over England, may enable the reader better to comprehend the state of things which have preceded our own times; and if these notices have excited a taste for historical reading in any one, they will have opened a field of rational inquiry and investigation which is not likely, when once entered upon, to be forsaken for frivolous and unprofitable amusements. The successive alterations which, among other ancient buildings, the castle at Newcastle-upon-Tyne has undergone, from its erection to its decay, represent a variety of social changes, an investigation of which may dissipate many vague and erroneous notions.

Before the Conquest, a number of religious houses existed where the town of Newcastle now stands, and the place was in consequence called Munk-ceastre. On William the Conqueror obtaining military possession of the country, all its strongholds were garrisoned by his followers, and the lands around them were held at the king's pleasure by his friends on a military tenure. Sir Walter Scott, in his 'Border Antiquities,' has given the following account of the foundation of the castle at Newcastle:—"Its founder was Robert de Curthose, son of William the Conqueror; and the era of its erection was 1088, on Robert de Curthose returning from an expedition to Scotland. The town in consequence took the name of Newcastle. Robert de Curthose perceived the local advantages which combined to render such a structure beneficial; for, placed on the frontiers of the two countries, commanding the course of so fine a river (the Tyne), and admirably adapted for the assembling of levies, in the event of any border irruption, it would be at once the protection and ornament of the place. The tower, as built by Robert, was of great strength, square, and surrounded by two walls. The height of the tower is 82 feet; the square on the outside 62 feet by 54; the walls 13 feet thick, and with galleries gained out of them. Within the tower there was a chapel; but such is the silent potency of time, and such the vain efforts of man, even in his most stupendous undertakings, that all that was once the outward defence to this place of strength is now defaced, and the site crowded with modern buildings, occupied by persons devoted to pursuits far different from those which busied the minds of the warlike inhabitants of the middle ages. The tower, however, still remains entire, and the corners of it project from the planes of the square, a mode of architecture much practised in Norman buildings. Its situation, on a lofty eminence, was admirably adapted to the purposes of its erection, that of overawing and commanding not only the whole town, but remotely, in the facilities for warfare which it afforded, the whole country. Its principal entrance was to the south, but the exact number of gates contained in the outward walls cannot now be precisely determined. The area enclosed by the wall contained three acres and one rood. Of such importance (continues Sir Walter Scott) was this castle considered in a rude and warlike age, when civilization was so tardy that the strong arm of government itself was too feeble to repress injuries and revolts, and in a country where predatory irruptions were constantly made by the neighbouring Scots, that most of the surrounding baronies were willing to pay considerable sums towards its support, under the articles castleward and cornage."

John Baliol did homage for the crown of Scotland to Edward I. in the great hall of the castle. The castle was in good repair at the time of the battle of Bannockburn, in 1313. In 1335 an inquisition was taken at Newcastle, and the castle was found not to be in so good a state by 300*l.* as it had been about twenty years before. It was recommended that several of the neighbouring barons should each of them build a resi-

dence within the liberties of the castle, for its defence. Three hundred years afterwards (reign of James I., when another inquisition appears to have been held) the changes which had been wrought in England had contributed to render unnecessary these strongholds of defence. The castles which the strong arm of military power had erected in a warlike age were retained for civil purposes. The individuals who held the inquisition in the year 1620 stated that the great square tower was full of chinks and crannies; that one-third of it was almost taken away; and that all the lead and covering which it had of old was embezzled and carried off; so that "the prisoners of the county of Northumberland were most miserably lodged, by reason of the showers of rain falling upon them." The charge of making the necessary repairs in the castle was estimated at 809*l.* Complaint was made that a dunghill, which was heaped up against the wall on the west side of the castle, had occasioned damage to the amount of 120*l.* In 1644 the castle was garrisoned by the royalist party, and stood a siege against the Scots. The rubbish complained of was removed for the purpose of making a rampart. The fees paid by the barons for the support of the castle were abolished by Charles I. This fact was indicative of the great alterations in the state of society which time and circumstances had occasioned; and the consequences to the building were its more rapid approach to decay. Bourne, who wrote his 'History of Newcastle' about the year 1730, states that, excepting the floor above the county gaol there was not one left, though there had been five divisions or stories of the castle besides. He describes the state of one or two portions of the edifice. "On the south side of the principal apartment there is (he says) an entrance into a sort of parlour or withdrawing-room; it has a fire-place in it, which has been a piece of curious workmanship, as is visible to this day; and this place has no connexion with any part of the castle but this room*. On the north side of this room is a door leading into an apartment where stands a well; it was eighteen yards before we reached the surface of the water, which seems to have been placed there on purpose for the more immediate service of this room. There are some little basins on the top of the well, with pipes leading from them, which conveyed water to different parts of the castle. This is plain from what may be observed in the county gaol, at the bottom of the castle, the round stone pillar in it having a hollow in the middle, of a foot wide, with a lead spout in the side of it." This arrangement indicates an attention to domestic convenience not very frequently to be met with in the age when the castle was erected.

In the inquisition held in 1335 it was complained that the king's chapel (*capella domini regis infra castrum*) had been neglected. This is that part of the castle represented in the cut, the style of which has been much admired as a fine specimen of the architecture which prevailed in England at the Norman Conquest. The arches are of the character frequently called Saxon. Bourne gives the following brief account of the chapel in his 'History':—

"This chapel, I have been told, stood on that part of the castle-yard where the moat-hall is; but, upon searching, I found it in the castle itself, according to this account. The door of it is at the bottom of the south wall of the castle, adjoining to the stairs which lead into the state-chamber. It has been a work of great beauty and ornament, and is still, in the midst of dust and darkness, far the most beautiful place in the whole building, the inside of it being curiously adorned with arches and pillars. It is easy to observe the different parts of it—the entrance, the body of it, and the chancel. On the left side of the entrance you go into a dark little room, which undoubtedly was the vestry.

* These apartments are in fact in the wall.

The full length of it is fifteen yards—the breadth of it six-and-a-half yards. It had three or four windows towards the east, which are now all filled up; nor is there any light but what comes in at a little cranny in the wall." The figure of a statue in the foreground is traditionally said to represent a countess of Northumberland.

In 1618 a page of the king's bedchamber obtained a lease of the castle for fifty years, at 40s. The corporation became the purchasers of this lease, and when it fell in petitioned the king for its renewal; but the magistrates for the county contended that it ought to be applied for county purposes, and sent up a counter petition. Lord Gerrard, a nobleman of some influence, stepped between the disputants, and through the king's favour obtained himself the lease of it; and it was held on lease by different individuals for many years. It now belongs to the corporation, and is occupied only by a keeper, who exhibits it to the public, together with a good miscellaneous collection of armour and weapons in the great hall, which were taken from the rebels in 1745. The ramparts have been lately repaired, and cannon mounted on them, which are fired on occasions of public rejoicing.

MODERN EGYPT.

A curious and interesting work will shortly be published under the Superintendence of the Society for the Diffusion of Useful Knowledge, entitled 'The Modern Egyptians.' This work exhibits a fuller and more distinct view of the social habits, characteristics, and religion of the Modern Egyptians, and of the manufactures, climate, and soil of Egypt, than has ever previously appeared. The long residence of the author in the country has given him advantages which few Europeans have possessed. The extracts which we are enabled to give, with specimens of its numerous wood-cuts, will give the reader some idea of the value of the book.

We shall introduce a few details of the Manners, &c., of the Modern Egyptians, by the following extracts from the Introductory Chapter, which describes "The Country and Climate—Metropolis—Houses—and Population."

"The Nile, in its course through the narrow and winding valley of Upper Egypt, which is confined on each side by mountainous and sandy deserts, as well as through the plain of Lower Egypt, is everywhere bordered, excepting in a very few places, by cultivated fields of its own formation. These cultivated tracts are not perfectly level, being somewhat lower towards the deserts than in the neighbourhood of the river. They are interspersed with palm-groves and villages, and intersected by numerous canals. The copious summer rains which prevail in Abyssinia and the neighbouring countries, begin to show their effects in Egypt, by the rising of the Nile, about the period of the summer solstice. By the autumnal equinox the river attains its greatest height, which is always sufficient to fill the canals by which the fields are irrigated, and, generally, to inundate large portions of the cultivable land: it then gradually falls until the period when it again begins to rise. Being impregnated, particularly during its rise, with rich soil washed down from the mountainous countries whence it flows, a copious deposit is annually spread, either by the natural inundation or by artificial irrigation, over the fields which border it; while its bed, from the same cause, rises in an equal degree. The Egyptians depend entirely upon their river for the fertilization of the soil; rain being a very rare phenomenon in their country, excepting in the neighbourhood of the Mediterranean; and as the seasons are perfectly regular, the peasant may make his arrangements with the utmost precision respecting

the labour he will have to perform. Sometimes his labour is light; but when it consists in raising water for irrigation, it is excessively severe.

"The climate of Egypt during the greater part of the year is remarkably salubrious. The exhalations from the soil after the period of the inundation render the latter part of the autumn less healthy than the summer and winter; and cause ophthalmia and dysentery, and some other diseases, to be more prevalent than at other seasons; and during a period of somewhat more or less than fifty days (called *el-khum'a'see'n*), commencing in April, and lasting throughout May, hot southerly winds occasionally prevail for about three days together. These winds, though they seldom cause the thermometer of Fahrenheit to rise above 95° in Lower Egypt, or in Upper Egypt 105°, are dreadfully oppressive, even to the natives. When the plague visits Egypt, it is generally in the spring; and this disease is most severe in the period of the *khum'a'see'n*. Egypt is also subject, particularly during the spring and summer, to the hot wind called the *semoo'm*, which is still more oppressive than the *khum'a'see'n* winds, but of much shorter duration; seldom lasting longer than a quarter of an hour, or twenty minutes. It generally proceeds from the south-east, or south-south-east, and carries with it clouds of dust and sand. The general height of the thermometer in the depth of winter in Lower Egypt, in the afternoon and in the shade, is from 50° to 60°: in the hottest season it is from 90° to 100°; and about ten degrees higher in the southern parts of Upper Egypt. But though the summer heat is so great, it is seldom very oppressive; being generally accompanied by a refreshing northerly breeze, and the air being extremely dry. There is, however, one great source of discomfort arising from this dryness, namely, an excessive quantity of dust; and there are other plagues which very much detract from the comfort which the natives of Egypt and visitors to their country otherwise derive from its genial climate. In spring, summer, and autumn, flies are so abundant as to be extremely annoying during the daytime, and inusquitoes are troublesome at night (unless a curtain be made use of to keep them away), and sometimes even in the day; and every house that contains much wood-work (as most of the better houses do) swarms with bugs during the warm weather. Lice are not always to be avoided in any season, but they are easily got rid of; and in the cooler weather fleas are excessively numerous.

"The climate of Upper Egypt is more healthy, though hotter, than that of Lower Egypt. The plague seldom ascends far above Cairo, the metropolis. It is most common in the marshy parts of the country, near the Mediterranean. During the last ten years the country having been better drained, and quarantine regulations adopted to prevent or guard against the introduction of this disease from other countries, very few plague-cases have occurred, excepting in the parts above-mentioned, and in those parts the pestilence has not been severe. Ophthalmia is also more common in Lower Egypt than in the southern parts. It generally arises from checked perspiration; but is aggravated by the dust and many other causes. When remedies are promptly employed, this disease is seldom alarming in its progress; but vast numbers of the natives of Egypt, not knowing how to treat it, or obstinately resigning themselves to fate, are deprived of the sight of one or both of their eyes."

The population of Egypt in the times of the Pharaohs is supposed in 'Modern Egyptians' (vol. i. p. 27) to have been about 6,000,000 or 7,000,000. The following is the author's statement of the present population:—

"The present population may be calculated as less than 2,000,000. The numbers of the several classes of

which the population is mainly composed are nearly as follow:—Moos'lim Egyptians (fella'hhee'n, or peasants, and townspeople), 1,750,000; Christian Egyptians (Copts), 150,000; 'Osma'nees, or Turks, 10,000; Syrians, 5000; Greeks, 5000; Armenians, 2000; Jews, 5000. Of the remainder (namely, Arabians, Western Arabs, Nubians, Negro slaves, Memloo'ks [or white male slaves], female white slaves, Franks, &c.), amounting to about 70,000, the respective numbers are very uncertain and variable. The Arabs of the neighbouring deserts ought not to be included among the population of Egypt*.

“The modern Egyptian metropolis is now called *Musr*; but was formerly named *El-Cka'hireh*; whence Europeans have formed the name of *Cairo*. It is situated at the entrance of the valley of Upper Egypt, midway between the Nile and the eastern mountain range of Moockut'tum. Between it and the river there intervenes a tract of land, for the most part cultivated, which, in the northern parts (where the port of Boo'la'ck is situated), is more than a mile in width, and, at the southern part, less than half a mile wide. The metropolis occupies a space equal to about three square miles; and its population is about 240,000. It is surrounded by a wall, the gates of which are shut at night, and is commanded by a large citadel situated at an angle of the town, near a point of the mountain. The streets are unpaved, and most of them are narrow and irregular; they might more properly be called lanes.



[Shops in a Street of Cairo.]

By a stranger who merely passed through the streets, Cairo would be regarded as a very close and crowded

* “The Moos'lim Egyptians, Copts, Syrians, and Jews of Egypt, with few exceptions, speak no language but the Arabic, which is also the language generally used by the foreigners settled in this country. The Nubians, among themselves, speak their own dialects.”

city; but that this is not the case is evident to a person who overlooks the town from the top of a lofty house, or from the minaret of a mosque. The great thoroughfare-streets have generally a row of shops along each side. Above the shops are apartments which do not communicate with them, and which are seldom occupied by the persons who rent the shops. To the right and left of the great thoroughfares are by-streets and quarters. Most of the by-streets are thoroughfares, and have a large wooden gate at each end, closed at night, and kept by a porter within, who opens it to any persons requiring to be admitted. The quarters mostly consist of several narrow lanes, having but one general entrance, with a gate, which is also closed at night; but several have a by-street passing through them.

“Cairo contains about 240,000 inhabitants*. We should be greatly deceived if we judged of the population of this city from the crowds that we meet in the principal thoroughfare-streets and markets: in most of the by-streets and quarters very few passengers are seen. Nor should we judge from the extent of the city and suburbs; for there are within the walls many vacant places, some of which, during the season of the inundation, are lakes (as the Bir'ket el-Ezbekee'yeh, Bir'ket el-Feel, &c.) The gardens, several burial-grounds, the courts of houses, and the mosques, also occupy a considerable space. Of the inhabitants of the metropolis, about 190,000 are Egyptian Moos'lms; about 10,000 Copts; 3000 or 4000 Jews; and the rest strangers from various countries †.”

The following are extracts from the first chapter—“Personal Characteristics and Dress of the Moos'lim Egyptians:”—

“Moos'lms of Arabian origin have, for many centuries, mainly composed the population of Egypt; they have changed its language, laws, and general manners, and its metropolis they have made the principal seat of Arabian learning and arts. In every point of view, Musr (or Cairo) must be regarded as the first Arab city of our age; and the manners and customs of its inhabitants are particularly interesting, as they are a combination of those which prevail most generally in the towns of Arabia, Syria, and the whole of Northern Africa, and in a great degree in Turkey. There is no other place in which we can obtain so complete a knowledge of the most civilized classes of the Arabs.

“The Moos'lim Egyptians are descended from various Arab tribes and families which have settled in Egypt at different periods; mostly soon after the conquest of this country by 'Amr, its first Arab governor; but by intermarriages with the Copts and others who have become proselytes to the faith of El-Isla'm, as well as by the change from a life of wandering to that of citizens or of agriculturists, their personal characteristics have, by degrees, become so much altered, that there is a strongly-marked difference between them and the natives of Arabia. Yet they are to be regarded as not less genuine Arabs than the townspeople of Arabia itself, among whom has long and very generally prevailed a custom of keeping Abyssinian female slaves, either instead of marrying their own countrywomen, or (as is commonly the case with the opulent) in addition to their Arab wives; so that they bear almost as strong a resemblance to the Abyssinians as to the Bed'awees, or Arabs of the Desert.

* “The population of Cairo has increased to this amount, from about 200,000, within the last three or four years. Since the computation here stated was made, the plague of this year (1835) has destroyed not fewer than one-third of its inhabitants; but this deficiency will be rapidly supplied from the villages.”

† “About one-third of the population of the metropolis consists of adult males. Of this number (or 80,000) about 30,000 are merchants, petty shop-keepers, and artisans; 20,000 domestic servants; 15,000 common labourers, porters, &c.: the remainder chiefly consists of military and civil servants of the government.”

“In general the Moos'lim Egyptians attain the height of about five feet eight, or five feet nine inches. Most of the children under nine or ten years of age have spare limbs and a distended abdomen; but, as they grow up, their forms rapidly improve. In mature age most of them are remarkably well proportioned; the men muscular and robust, the women very beautifully formed and plump, and neither sex is too fat. In Cairo, and throughout the northern provinces, those who have not been much exposed to the sun have a yellowish, but very clear complexion, and soft skin; the rest are of a considerably darker and coarser complexion. The people of Middle Egypt are of a more tawny colour, and those of the more southern provinces are of a deep bronze or brown complexion—darkest towards Nubia, where the climate is hottest. In general, the countenance of the Moos'lim Egyptians (I here speak of the *men*) is of a fine oval form; the forehead of moderate size, seldom high, but generally prominent; the eyes are deep sunk, black, and brilliant; the nose is straight, but rather thick; the mouth well formed; the lips are rather full than otherwise; the teeth particularly beautiful; the beard is commonly black and curly, but scanty. I have seen very few individuals of this race with grey eyes, or, rather, few persons supposed to be of this race; for I am inclined to think them the offspring of Arab women by Turks or other foreigners. The Fella'hhee'n, from constant exposure to the sun, have a habit of half-shutting their eyes; this is also characteristic of the Bed'awees. Great numbers of the Egyptians are blind in one or both eyes.

“The costume of the men of the lower orders is very simple. These, if not of the very poorest class, wear a pair of drawers, and a long and full shirt or gown of blue linen or cotton, or of brown woollen stuff (the former called *'er'ee*, and the latter *zaaboo't*), open from the neck nearly to the waist, and having wide sleeves.



[Men of the Lower Classes.]

Over this, some wear a white or red woollen girdle. Their turban is generally composed of a white, red, or yellow woollen shawl, or of a piece of coarse cotton or muslin, wound round a turboo'sh, under which is a white or brown felt cap (called *lib'deh*); but many are so poor as to have no other cap than the *lib'deh*—no turban, nor even drawers nor shoes, but only the blue or brown shirt, or merely a few rags; while many, on the other hand, wear a soodey'ree under the blue shirt; and some, particularly servants in the houses of great men, wear a white shirt, a soodey'ree, and a *koofta'n* or *gib'beh*, or both, and the blue shirt over all. The full sleeves of this shirt are sometimes drawn up by means of cords, which pass round each shoulder and cross behind, where they are tied in a knot. This custom is adopted by servants (particularly grooms), who have cords of crimson or dark-blue silk for this purpose. In cold weather, many persons of the lower classes wear an *'abba'yeh*, like that before described, but coarser; and sometimes, instead of being black, having broad strips, brown and white, or blue and white, but the latter rarely. Another kind of cloak, more full than the *'abba'yeh*, of black or deep-blue woollen stuff, is also very commonly worn; it is called *diffee'yeh*. The shoes are of red or yellow morocco, or of sheep-skin.”

We conclude with an extract on the state of early education in Egypt:—

“Schools are very numerous, not only in the metropolis, but in every large town; and there is one, at least, in every considerable village. Almost every mosque, *sebee'l* (or public fountain), and *hho'd* (or drinking-place for cattle) in the metropolis has a *koot-ta'b* (or school) attached to it, in which children are instructed for a very trifling expense; the *sheykh* or *fick'ee* (the master of the school) receiving from the parent of each pupil half a piaster (about five farthings of our money), or something more or less, every Thursday. The master of a school attached to a mosque or other public building in Cairo also generally receives yearly a turboo'sh, a piece of white muslin for a turban, a piece of linen, and a pair of shoes; and each boy receives, at the same time, a linen skull-cap, four or five cubits of cotton cloth, and perhaps half a piece (ten or twelve cubits) of linen, and a pair of shoes, and, in some cases, half a piaster or a piaster. These presents are supplied by funds bequeathed to the school, and are given in the month of *Rum'ada'n*. The boys attend only during the hours of instruction, and then return to their homes. The lessons are generally written upon tablets of wood, painted white; and when one lesson



[A Schoolboy learning the Alphabet.]

is learnt, the tablet is washed and another is written. They also practise writing upon the same tablet. The schoolmaster and his pupils sit upon the ground, and each boy has his tablet in his hands, or a copy of the *Ckooor-a'n*, or of one of its thirty sections, on a little kind of desk of palm-sticks. All who are learning to read recite their lessons aloud, at the same time, rocking their heads and bodies incessantly backwards and forwards; which practice is observed by almost all per-

sons in reading the Ckoor-a'n, being thought to assist the memory. The noise may be imagined.

"The boys first learn the letters of the alphabet; next, the vowel points and other orthographical marks; and then, the numerical value of each letter of the alphabet. Previously to this third stage of the pupil's progress, it is customary for the master to ornament the tablet with black and red ink, and green paint, and to write upon it the letters of the alphabet in the order of their respective numerical values, and convey it to the father, who returns it with a piaster or two placed upon it. The like is also done at several subsequent stages of the boy's progress, as when he begins to learn the Ckoor-a'n, and six or seven times as he proceeds in learning the sacred book, each time the next lesson being written on the tablet. When he has become acquainted with the numerical values of the letters, the master writes for him some simple words, as the names of men; then the ninety-nine names or epithets of God; next the Fa't'hah, or opening chapter of the Ckoor-a'n, is written upon his tablet, and he reads it repeatedly until he has perfectly committed it to memory. He then proceeds to learn the other chapters of the Ckoor-a'n: after the first chapter he learns the last; then the last but one; next the last but two, and so on, in inverted order, ending with the second, as the chapters in general successively decrease in length from the second to the last inclusively. It is seldom that the master of a school teaches writing, and few boys learn to write unless destined for some employment which absolutely requires that they should do so; in which latter case they are generally taught the art of writing, and likewise arithmetic, by a *ckabba'nee*, who is a person employed to weigh goods in a market or *ba'za'r*, with the steelyard. Those who are to devote themselves to religion, or to any of the learned professions, mostly pursue a regular course of study in the great mosque El-Az'har.

"The schoolmasters in Egypt are mostly persons of very little learning; few of them are acquainted with any writings except the Ckoor-a'n, and certain prayers, which, as well as the contents of the sacred volume, they are hired to recite on particular occasions. I was lately told of a man, who could neither read nor write, succeeding to the office of a schoolmaster in my neighbourhood. Being able to recite the whole of the Ckoor-a'n, he could hear the boys repeat their lessons; to write them, he employed the *'areef*' (or head boy in the school), pretending that his eyes were weak. A few days after he had taken upon himself this office, a poor woman brought a letter for him to read to her from her son, who had gone on pilgrimage. The *fick'ee* pretended to read it, but said nothing; and the woman, inferring from his silence that the letter contained bad news, said to him, 'Shall I shriek?' He answered 'Yes.' 'Shall I tear my clothes?' she asked; he replied 'Yes.' So the poor woman returned to her house, and with her assembled friends performed the lamentation and other ceremonies usual on the occasion of a death. Not many days after this her son arrived, and she asked him what he could mean by causing a letter to be written stating that he was dead. He explained the contents of the letter, and she went to the schoolmaster and begged him to inform her why he had told her to shriek and to tear her clothes, since the letter was to inform her that her son was well, and he was now arrived at home. Not at all abashed, he said, 'God knows futurity! How could I know that your son would arrive in safety? It was better that you should think him dead than be led to expect to see him, and perhaps be disappointed.' Some persons who were sitting with him praised his wisdom, exclaiming, 'Truly, our new *fick'ee* is a man of unusual judgment!' and, for a little while, he found that he had raised his reputation by this blunder."

HEREFORDSHIRE CUSTOMS

WHILE we are investigating the various manners and customs of foreign lands, we are frequently ignorant or unobservant of those of our own counties, some of which are not without interest. To illustrate the foregoing remark, we shall describe certain customs which prevail in Herefordshire, and one which is practised in Devonshire. Their observation is still held by the humbler classes to be of considerable importance, and they lead to much rustic hilarity and enjoyment. From the gradual diffusion of knowledge, and the rapidity of communication, introducing the manners of the towns into the country, these customs, so characteristic of other times, are day by day gradually declining in the rural districts, and it appears probable that the time will soon come when they will be totally disregarded.

BURNING THE BUSH.—On the 1st of January, in that part of Herefordshire contiguous to Leominster, the men attached to each farm procure a long pole which they bind with straw all the way up, and place on the highest ground of the farm; a large truss of straw is fixed on the summit, and several trusses at the lower end; for this purpose barley straw is generally employed, it being less combustible than that of wheat. The straw is then kindled, and the men regale themselves with cider and cakes; a hawthorn bush is afterwards cut, which having singed in the fire, they return home, taking the bush to the farm-house, where it is given to the master, who hangs it up in the kitchen; more cider is distributed among the men, and the bush remains till the following year, when it is replaced by a new one, the old bush being destroyed. The early hour of five in the morning is usually chosen for the ceremony, and the day is enjoyed as a holiday.

On every farm on Twelfth-eve the farmer, his friends, and servants assemble and proceed to a field of wheat, where twelve fires are lighted on twelve ridges of wheat, the thirteenth and largest being kindled on the highest ground. The attendants, whose numbers sometimes exceed forty, headed by the master of the family, pledge the company in cider, which circulates very freely. The men at intervals shout the name of the master with the addition of "for ever," and "huzza," which is responded to by similar shouting and hallooing, induced by the like occasion on other farms. It is considered unlucky if this ceremony is omitted.

Previous to Twelfth-eve the mistress of the house prepares a number of flat cakes about the size of twopenny breakfast cakes, each having a hole in the centre—these are taken by the servants and visitors to the stalls where the oxen are kept; they also provide themselves with a pail of cider and a number of glasses and jugs. A cake is then placed on one of the horns of the first or finest ox, when each man fills his glass and says—

"Here's to thee, Brown Boy,* with thy lily-white horn,
Pray God send thy master a good crop of corn;
Both wheat, rye, and barley, and all sorts of grain,
And if I live till this time twelvemonth I'll drink to thee again."

A small quantity of cider is thrown from one of the glasses up the nostrils of the ox, which makes it snort and throw the cake from its horn. If the cake falls in front of the animal, it belongs to the man who drives the ox; but if behind, it is the perquisite of the boy who attends the team. This is repeated with every ox, and it is a common trick for the boy to prick the animal with a pin just as the cider is thrown, to make it turn round, and jerk the cake back so that he may obtain it.

When this is concluded with every ox, the party adjourn to the cow-house, where similar proceedings take place with regard to the cows, except that the dairy-maid and the cow-boy receive the cakes respectively as they fall before or behind the animal. The

* Name of the ox,

master and mistress of the house are present, and the whole concludes by drinking their healths. These ceremonies usually succeed the thirteen fires.

In Devonshire an ancient custom is still observed on Christmas Eve, which is supposed to ensure a good crop of apples. The farm servants procure an ash faggot, round which they carefully put as many binds as possible, because they are rewarded with cups of cider equivalent in number to the binds which encircle the faggot. The faggot is then placed on the fire, and as each bind bursts, they claim a cup of cider; they have also a bowl of toast and cider which they take into the orchard, and putting a piece of the toast on the king or principal apple-tree, repeat the following lines:—

Apple-tree, we wassail thee,
To bear and to blow apples enow,
Hats full, caps full,
Three bushel bags full, hurrah! hurrah! hurrah!

It appears that exactly the same words are not always used on this occasion, a different version being given in the 'Gentleman's Magazine,' 1791.

TEUTONIC AND SCANDINAVIAN ROMANCES —THE SONG OF THE NIBELUNGEN.

[Continued from No. 292.]

MR. WEBER, to whose learned labours we are indebted for the English translation of this wild romance, opens the story in verse of precisely the same measure as the Teutonic poem. The rest of the translation is partly in poetry, and partly in prose. Chrimhild, the heroine, is thus introduced:—

"In ancient song and story marvels high are told,
Of knights of high emprise, and adventures manifold;
Of joy and merry feasting; of lamenting, woe and fear;
Of champions, bloody battles, many marvels shall ye hear.

A noble maid, and fair, grew up in Burgundy;
In all the land about fairer none might be:
She became a queen full high; Chrimhild was she hight;
But for her matchless beauty fell many a blade of might."

This Chrimhild had three brothers, Gunter, Ghernot, and Ghiseler, who were all kings, and anxious to ally their sister to some great warrior; but she obstinately resisted all such proposals, and vowed she would never marry, because she dreamt one night that a falcon she had trained and nourished, and cherished above all things, was struck down and killed by two fierce eagles. Siegfried, the wonderful hero who was destined to work a change in her resolution, was son of Siegmund, King of Netherland. Hearing of the matchless beauty of Chrimhild he resolved to go and gain her for his bride, notwithstanding all that was told him of her obstinacy, her brothers' pride, and the savage fierceness of her uncle Hagen. He accordingly went to Worms, where she resided with her brother King Gunter, and instead of taking a formidable army with him, as his father and mother recommended, he would only accept of an escort of twelve knights. But the hero was otherwise well defended, and knew what he was about.

In the course of preceding journeys in search of adventures he had slain twelve giants, made himself master of an immense treasure, of a magical sword called Balmung, and of a magical *tarn-cap* that rendered him invisible whenever he put it on. Nor were these all his advantages; for having killed a dragon, or fire-drake, he had bathed in the blood of the monster, "whereby his skin became of a horny consistence, which no sword or other weapon could penetrate." Being advised of these facts King Gunter thought it wise to entertain him civilly, and Siegfried was allowed to thrash all the warriors of Burgundy in jousting and tournaments, for none could resist his might. Still the sight of the fair Chrimhild was denied him—but at length events favoured his suit. One day the King of

Saxony sent to threaten Gunter, her brother, with war and invasion unless he paid him tribute and acknowledged himself his vassal. Siegfried seized this opportunity, and offered to go and chastise the Saxons, requiring only 1000 men, although he knew the enemy mustered 40,000, besides giants. This offer was joyfully accepted, and the hero soon returned with the King of Saxony, his ally the "strong King of Denmark," and a host of prisoners in chains, all of whom Siegfried presented to Gunter as he sat in a balcony of the palace with his sceptre of gold in his hand*. In reward for this service the hero was presented to Chrimhild, who, "though she never before saluted man," kissed Siegfried, when told to do so by her grateful brother. There was now eating and drinking for twelve nights and twelve days, no fewer than 5000 guests and 32 princes royal being assembled at the feast. But Siegfried had other achievements to perform before he obtained his bride, who, however, by this time, dazzled by his heroic merits, had fallen in love with him, and forgotten her ill-omened dream of the falcon.

"This youth he was the falcon she in her dream beheld,
Who by the two fierce eagles dead to the ground was felled;
But since right dreadful vengeance she took upon his foe
For the death of that bold hero died many a mother's son

When the feast was over at Worms, tidings came to the court of a queen named Brunhild, who dwelt in a country "far over the sea," called Isenland. Her beauty was matchless, but her fierceness and strength equalled her beauty. She forced every champion who came to woo her to contend with her in throwing the spear, leaping, and casting the stone. Whoever failed in the contest with her, was put to a cruel death for his presumption in attempting it. It was scarcely known how many lovers she had killed already, yet, in spite of such discouraging examples, Chrimhild's brother, the most royal Gunter, determined to try his fortune with her. Siegfried's offer to accompany the king was gladly accepted. Great preparations were made for the journey. "Chrimhild undertook to provide for each three suits of the richest apparel; and with thirty of her virgins she was employed for seven weeks in the task. Their mantles were made of white silk, brought from Arabia, and of green silk from the land of Zazamank, embroidered with many a gem. The covers of the mantles were made of the skins of strange fishes, covered with silk from Morocco and Libya. The choicest ermine was procured, and the heroes were richly adorned with gems set in Arabian gold." Thus apparelled, they embarked in a "strong ship," which sailed down the Danube, and on the twelfth day landed them at the "strong castle" of Isenstein, in the land of Brunhild. As soon as that cruel fair one was informed of the motives of King Gunter's coming, she ordered preparations to be made for the trial of strength, and presently came forth in complete armour, with a shield of the thickness of three spans, and of such weight, that four of her chamberlains could scarcely carry it. When Hagen, the uncle of Gunter, cast his eyes upon her, he exclaimed with trepidation,—

"And how is't now, King Gunter? Here must you tine † your life!
For the lady you would gain well may be the devil's wife!"

The king, too, felt uncomfortable; and when he saw a mighty spear carried by three knights, and a stone that twelve could hardly lift, "he would fain have been back in his castle at Worms, without the love of Brunhild." But at this critical moment, Siegfried, who had put on his *tarn-cap*, and was invisible, took Gunter's shield, and whispering in his ear, told him to imitate the movement he was about to perform. Thus Gunter visibly, and the hero unseen, stood under cover of the shield. Brunhild threw the spear with marvellous

* See the Frescoes, in No. 292.

† Lose.

force; Siegfried received it on the shield, but such was the shock that he and his companion were both struck to the ground, and the blood gushed from their mouths. Siegfried, placing his invisible hand before the hand of the king, returned the spear and knocked her down. Then Brunhild in great wrath heaved up the heavy stone, threw it to an immense distance, and leaped after it, so that "her armour resounded loudly." Siegfried next seized the stone, and hurled it to a still greater distance; and then, taking Gunter up in his arms, leaped after it. The wrathful beauty fell at the king's feet, and acknowledged he had beaten and won her! At this touching moment Siegfried, who had stepped aside and taken off his tarn-cap, appeared to the eyes of the conquered queen, and with an innocent face asked when the games were to begin. Brunhild told him they were over, at which he expressed great astonishment.

After this amiable courtship, King Gunter was sorely afraid lest his bride should treacherously murder him and his servants, but his fears were no sooner known to Siegfried than that hero volunteered to go to his own dominions in Nibelungen, and return with a thousand choice knights to protect the brother of his dear Chrimhild. Putting on his cap of invisibility, he went alone aboard the ship, heaved anchor, and sailed away, much to the wonderment of Queen Brunhild's warriors, who saw no mariners in the vessel. The next day he reached a castle on a mountain, in the land of the Nibelungen, where his treasure was deposited, and where he had thirty thousand and more warriors "fast asleep," but all ready (on being awakened) to do his bidding. At this, as in many other parts, the poem runs into an episode of fighting and bone-breaking; but (to keep to the main stream of narrative) Siegfried selects 1000 out of the 30,000 sleepers, and returns with them to the castle of Isenstein. When the fierce Brunhild sees this arrival, she asks who they may be, and Gunter tells her (for lying goes for nothing in these heroic tales) that they are part of his retinue he had left behind him in his haste to seek her lovely presence. Being thus put in a safe position, Gunter feels comfortable, and getting his bride on board ship, they all make sail, and in due course of time reach Worms, where the marriage is to be celebrated. Gunter's arrival in the capital of his dominions was celebrated with tournaments and other games. When these were over, and as they were washing their hands and faces previous to supper, Siegfried reminded King Gunter that he had promised him his sister Chrimhild if he (Gunter) should gain Brunhild. Gunter very readily complied, and the marriage ceremony was performed between the hero and the heroine of the Nibelungen Lay that very evening, immediately after the marriage of the king and Brunhild.

The proud Brunhild was indignant at this match, which she thought beneath the rank of her sister-in-law; and she told Gunter he must expect no favour from her, unless he declared what were his motives for consenting to such an unequal alliance as that between Chrimhild and a vassal. Gunter assured her that, though Siegfried might appear as a vassal at his court, he was a king in his own country, little inferior in power to himself. This answer did not satisfy her, and so Gunter found to his cost when they retired for the night. She took her girdle, and, tying his hands and feet together, hung him upon a nail in the wall.

The next morning King Gunter was very disconsolate; nor could a splendid tournament, the dubbing of six hundred new knights, nor the mass in the cathedral, dissipate his melancholy. Siegfried had shrewd suspicions of what had happened, and these were verified on inquiry.

"Thus to his guest spake Gunter,—With shame and woe I sped;
I have brought the evil devil, and took her to my bed;

When I hoped her love to gain, she bound me as her thrall;
To a nail she bore me, and hung me on the wall.
There I hung, with fear and anguish, till the sun of morning
shone,
While soundly in the bed slept Brunhild, all alone.
Loudly to thee I plain of my shame and sorrow sore."
Then spake the hero Siegfried,—"Right sorry am I therefore."

But Siegfried's friendship went farther than this rather cool expression of condolence, and he promised to help the King the next night, as he had done in his former trial of strength. Accordingly, when bed-time came, he put on his tarn-cap, and, joining the chamberlains, entered invisibly the chamber of Gunter, and placed himself by his side. As soon as the chamberlains retired, and the lights were put out, Siegfried began to assist the King, when a most violent and singular combat commenced. Brunhild threw the hero to the ground with such violence that his head "loudly resounded on the footstool,"—she pressed him between a door and the wall, until he roared with pain,—she squeezed his hands till the "blood flowed from his nails,"—but at last the strength of Siegfried prevailed; and leaving the subdued wife with her husband, he retired to his own bride, carrying off Brunhild's girdle and ring, both of which, shortly after, in a moment of affectionate confidence, he gave to the fair Chrimhild, "and for this gift he and many other champions lost their lives."

Next morning King Gunter was in high good humour, and dispensed rich gifts on all sides. "A high feast" was given, which lasted fourteen days; and then the guests departed for their several homes, Siegfried conducting his wife with him to Netherland.

Ten years had passed in peace, when "Brunhild one day ruminated how Siegfried was vassal to Gunter, and had not for a long time done any homage to his lord." She easily prevailed on the king to invite him and his wife to "a high feast" at Worms, and Siegfried, with Chrimhild and his royal father, Siegmund, accompanied by a thousand Netherland knights, appeared at court as soon as possible. For eleven days tournaments and other games were celebrated with much harmony; but at length, in a procession to hear mass, this concord was fatally interrupted. Brunhild and Chrimhild had been praising the perfections of their several husbands; and growing warm upon the subject, the former taunted the latter with her husband's being the vassal of King Gunter. Chrimhild denied the fact; and firing at the insult, vowed she would take precedence of her sister-in-law in the procession to the cathedral. Accordingly she went on, attended by forty-three maidens much more splendidly apparelled than the maidens of the queen, and by all the knights Siegfried had brought to court. When Brunhild saw this, she exclaimed that no wife of a vassal should go before a queen. The gentle Chrimhild retorted by calling her sister-in-law by an opprobrious name, and pressing forward entered the cathedral before her. Brunhild was highly afflicted, but her rage, at this public insult, was greater than her grief. As soon as mass was over she again fell upon her rival, and demanded what proofs she could give of her dishonour. Chrimhild replied by instantly producing the fatal ring and girdle which had been given to her by her husband.

This is a very imperfect outline of the Lay which delighted the rude warriors of the North a century ago. As a picture of manners it is exceedingly curious. We may have occasion to revert to the subject in giving a description of the splendid Frescoes by which it is illustrated.

[To be continued.]

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TEUTONIC AND SCANDINAVIAN ROMANCES—THE NIBELUNGEN LAY.

[Continued from No. 294.]



[From the Frescoes of the Nibelungen.]

As soon as Chrimhild had produced the ring and girdle, the Queen departed in great wrath, and complained to her husband Gunter, with whom was the hero Siegfried. Siegfried swore an oath that he had not "said the words." The fierce uncle of the king, Hagen, who hated the hero, on hearing the lamentations of Brunhild, undertook to revenge her injuries upon Siegfried, and Ortwin and Ghernot joined him in a plot. With the king's consent these conspirators pretended that thirty heralds had arrived at court from the lately-liberated kings of Denmark and Saxony to defy Gunter. The generous Siegfried instantly volunteered to take up the king's quarrel as before; upon which Hagen went to

Chrimhild, and feigning great friendship for her husband, asked if there were not some single part of his horny body that required defence in battle. Chrimhild, whose rage had been cooled, regretted in the first place that she had given offence to her sister-in-law Brunhild (for which, she said, her husband had "beat her black and blue"), and then, suspecting nothing, she told Hagen that when Siegfried bathed himself in the dragon's blood, a leaf had stuck on his skin, just between the shoulders, and had prevented that part from becoming impenetrable. "Well," quoth Hagen, "only sew a small cross upon his garment, in the place where the spot is, and I promise you to defend that part of

his body with all care, when we go against the Danes and Saxons." The small cross was affixed, and now Siegfried was informed that there was to be no war, but only a great royal chase of boars and bears in the forest of Vasgovia,—where the treason was to be done.

Great preparations were made, and nothing was heard but the baying of hounds and the blowing of horns. By the advice of Brunhild every kind of meat was carried to a well in the forest,—but no wine. Chrimhild, who, like a good wife, had forgot the sound drubbing she received from him, did all she could to persuade him not to go to the hunt, as she had been warned of his fate in two dreams. But his doom was inevitable; and taking an affectionate leave of his wife, who gazed in his face and caressed him "full tenderly," he departed with his hound in leash, and mounted his swift horse (See cut). When the chase began, who so distinguished himself as Siegfried? Killing all kinds of wild beasts, and among them a half-wolf (demi-wolf), a lion, a buffalo, an elk, a bison, four uris, and one fierce bull, besides deer, boars, and bears without number.

King Gunter then caused a horn to be blown, giving notice that he would dine at the well.

"In gorgeous guise the hero did to the fountain ride;
Down unto his spurs, his sword hung by his side;
His weighty spear was broad, of mighty length, and strong;
A horn of the gold so red o'er the champion's shoulders hung.

Of fairer hunting garments ne'er heard I say before;
A coat of the black velvet the noble hero wore;
His hat was of the sable, full richly was it dight;
Ho! with what gorgeous belts was hung his quiver bright!

And by his side hung Balmung, that sword of mickle might,
Which in the field Sir Siegfried struck on the helmets bright;
Not the truest metal the noble blade withstood—
Oh! thus right gloriously rode the hunter good!"

To make "disport for the king," Siegfried caught a great bear alive, and brought him to the well, where the animal made great havoc among the kitchen utensils and dinner-service, "to the exceeding amusement of the company," until, wearying of this sport, the hero slew the beast.

The gallant huntsmen had not proceeded far with their dinner, when Sir Siegfried was full wroth with Haghen for having forgotten the wine. That traitor said the wine had not been forgotten, but carried to another well in a distant part of the forest. On this Siegfried proposed a foot-race (we suppose to go and fetch the wine), and throwing off part of his garments and all his arms, to run the lighter, started with the rest, whom he far outran. At the well King Gunter laid himself down on his belly, and stretching his head over the hollow drank a copious draught. Siegfried followed the royal example, but he was no sooner prostrate than Haghen treacherously struck a lance into the vulnerable spot between his shoulders. The hero, leaping to his feet, pursued the murderer; and though wounded and weaponless, knocked Haghen down, and broke his shield in twain. Then he fell down himself and died, upbraiding his assassins with ingratitude and cowardice, but recommending his spouse Chrimhild to the mercy of the king, her brother. Gunter wished to give out that he had been slain by robbers, but Haghen fiercely said he cared not to conceal the fact that he had done him to death.

To give a keener edge to the Queen's revenge, Haghen caused the dead body to be laid before the chamber-door of Chrimhild, who, knowing nought of what had happened, and coming suddenly forth, beheld it there. She shrieked—clasped her hands on high, and then threw herself on her murdered husband, making "boundless lamentations." After this storm of grief, her first thoughts were for vengeance. She sent for Siegmund, the father of Siegfried, who, as well as his 1100 champions, swore instant revenge. But

Chrimhild said she would bide her own time. She ordered a splendid coffin of gold and silver, in which the body of the hero was carried to the cathedral. Gunter, with Haghen and others, went to bewail the death, which they now all said had been done by robbers, but Chrimhild, standing by the open coffin, fiercely bade those who knew themselves to be innocent to approach and touch the corpse.

"A marvel high and strange is seen full many a time:
When to the murdered body nears the man who did the crime,
Afresh the wounds will bleed: the marvel now was found
As Haghen felled the champion with treason to the ground*."

For three days and three nights, without food or drink, did Chrimhild watch beside the coffin, and when it was about to be sunk into the grave she caused it to be again opened, and once more she took leave of her husband. Her next care was to distribute 30,000 marks of gold among the poor, that so his soul might have peace.

Brunhild gloried in her deep revenge, and Gunter and Haghen induced Chrimhild to send for the Nibelungen treasure, which Siegfried had given her for her jointure. The dwarf Alberich, who held it in custody, grieved to give it up, and loudly lamented the loss of the hero and of his tarn-cap. Under the mountain of treasure, which it took twelve waggons four days and four nights to remove, there lay a wishing-rod †, by which the possessor might become master of the whole world; but as the dwarf Alberich would not explain this miraculous quality, the rod remained of no use. Seeing that Chrimhild was gaining great popularity by her liberal employment of this wealth, Haghen, with some other conspirators, got possession of it all, and sunk it into the Rhine, swearing at the same time that they would never reveal the place. After this fresh wrong Chrimhild dwelt thirteen years at her brother's court, but then came the prospect of revenge for her.

Attila, King of the Huns (called in the poem Etzel), sent a splendid embassy to Worms to demand her hand. At first she refused, because she had determined to remain a widow, and could on no account as a good Christian think of marrying a heathen prince. But Rudiger, the Hun, used potent arguments, telling her that Etzel had twelve kings and thirty princes, all his vassals, and that,

"From the Rhone unto the Rhine, from the Elbe to the distant sea,
No king of greater riches and greater power may be;"

and he finally overcame her disinclination by swearing to Chrimhild that he and his men would be ever ready to avenge her injuries.

Etzel, accompanied by a great host of vassals, "among whom were Russians, Greeks, Poles, Wallachians, Kybens, the savage Petscheners, and many other nations," received his bride at the town of Tulu. The marriage ceremonies, the feasting, the largesses, were surpassingly splendid, and Werbel and Swemmel, the two court minstrels, got each a thousand marks in gold.

[To be concluded in our next.]

AGRICULTURE, GARDENING, &c. OF CHINA.

[Continued from No. 293.]

RICE, and not corn, is, as we have said, the staff of life in China. It is cultivated wherever the water necessary to its growth can be commanded, and most of what is really admirable in the industry and ingenuity of the Chinese farmers is to be found in their system of irrigation and their economy of the precious fluid.

* Mr. Weber thinks that this is the earliest instance in which this kind of ordeal is mentioned.

† The reader will remember the wishing-cap of Fortunatus. This widely-spread superstition seems to have existed in Germany in the remotest times.

Besides the canals and artificial rivulets which run through many parts of the country, as close to each other, comparatively speaking, as the veins in the human body, they dig reservoirs to catch the rain or the water that may descend from the upper lands, and this they distribute over their rice-fields by means of different hydraulic machines worked by the hands or feet, and sometimes by a buffalo.

The rice is at first thrown irregularly into the earth, but when it has grown to the height of a foot or a little more, it is plucked up and carefully transplanted in small sheaves and in straight lines, the earth being previously well ploughed by men working knee-deep in water, broken by their mattocks and levelled by a cylinder or a flat-board, in order that the water may flow equally over every part of it.

Corn lands, when they are near a lake or canal, or other easy means of irrigation, are ploughed the instant that the grain is cut, which in the central provinces of the empire is in the month of June, at which time the young rice-fields are at the height of eight or ten inches. The Chinese farmer then thins the rice-fields, and transplants the young rice into the wheat-fields, which are immediately flooded. Besides these alternate crops of wheat and rice, alternate crops of wheat and cotton, or wheat and indigo, are of common practice.

These successions of crops, which never let the land lie fallow, render necessary an immense quantity of manure; and as the Chinese are unfortunately very scantily provided with flocks and cattle, all sorts of means are resorted to in order to procure composts and substitutes. They indeed work the soil almost incessantly with extraneous matter, mixing marl and stiff clay with light and sandy soils, and sand and gravel with clayey soils. Rivers, canals, and even every pool of water, are dragged for slime and mud, and extreme attention is paid to the preservation of human ordure and urine.

Mr. Barrow informs us that it is the universal practice to steep all seeds in urine before sowing them, and that the Chinese affirm of turnip seeds more particularly, that if they are well steeped in urine in which lime is dissolved, the plant cannot be attacked by the insects. To preserve this and other materials there are large earthen jars sunk in the ground near every house, and in the towns and villages old men and children are everywhere seen moving about with jars, baskets, and rakes, collecting every species of dirt, and whatever offals they can meet with.

The outskirts of all the towns are lined by rows of public retiring-houses, which seem constructed rather for exposure than concealment, being merely open sheds, and seldom without several occupiers. "The proprietors of these establishments," says Mr. Clarke Abel, "derive great profit from the sale of their contents, called by them *ta-few*, which they use extensively as a manure. It is prepared in several ways. Sometimes it is mixed with a large quantity of mould, and made into cakes. In forming these, a layer of a few inches in thickness is spread out in the open air on an even surface, and, when dry, is divided into pieces of the requisite dimensions, generally about a foot square. These, which it is asserted not only lose the odour of their principal ingredient, but acquire that of the violet! are conveyed all over the empire, and find a ready sale. Before being used, these cakes are dissolved in large quantities of water, or broken into small pieces, and are then applied to the land. When, however, the *ta-few* is to be employed near the place in which it is accumulated, a different mode of preparing it is pursued and generally preferred. In pits lined with plaster it is diluted with a large proportion of water, and suffered to remain several days before it is used. It is then either poured into small channels that traverse the field in every

direction, or applied directly to the roots of the plants, or scattered over them with a small bucket. To the use of this manure is in a great measure to be attributed the surprising productiveness of small plots of ground about Chinese huts, especially in their favourite vegetable the *petsai* (which is to them what the potato is to the peasantry of Ireland). It is not, however, confined to this plant, but largely used in their cotton fields, to young plants of which it is applied in considerable quantities. That it is also used in their rice grounds, and in all cases in which manure is required, there can be little doubt*."

Among this extraordinary people even the hair of the human head and the shavings of the beard are collected and preserved for the purposes of agriculture. Every barber—a numerous body in China, where, all the head being shaved except a lock behind, few men have dexterity enough to shave themselves—is always provided with a small bag, in which he carefully deposits the locks and shavings he cuts off, which are indeed considered excellent manure. According to the missionaries they cut off the bristles and even shave their swine, the hair of which is esteemed most valuable for giving strength and vigour to their rice-lands. "In short," as Mr. Barrow remarks, "it may literally be said in this country, that nothing is permitted to be lost."

The average produce of the rice-lands, taking all over the empire, may be about thirty or thirty-five measures for one of seed: that of corn-lands is very inferior, being not much above fifteen for one. Marco Polo indeed says, that, in Southern China, rice, panicum, and millet, render each one hundred for one; and we may believe in this proportion, as Mr. Marsden reckons the produce of the best rice-lands in Sumatra at a hundred and twenty for one, the disproportion of which increase to everything known in Europe he attributes mainly to the saving of grain in the mode of sowing it. But of course, when we speak of so vast an extent of country as the Chinese Empire, we include almost every variety of soil, from the best to the worst.

The excessive cultivation of rice, to the exclusion of other grain, is considered one of the defects of Chinese agricultural policy; for though rice yields, in favourable seasons, a more abundant and, perhaps, an easier crop, it is more liable to fail than most others. A want of water in its early stages, or a surplus of water in its maturer ones, is alike fatal to it. It is more subject than any other grain to the depredations of birds and locusts, which abound here beyond European conception. The locusts in particular, at times, literally lay waste the cultivation of whole provinces, and there seems to be no exaggeration in the picture of this scourge drawn by a native author:—"Their prodigious multitudes cover the whole canopy of heaven;—they are so close that their wings touch each other;—their number is so vast, that, in lifting up your eyes, you might fancy you saw a high green mountain inverted over your head;—and the noise they make in flying is like the beating of many drums." At other times these destructive insects sweep in one long close line through a country, leaving utter desolation in their track, like the course of a lava-stream from a volcano, and freshness and verdure, or glowing harvests, on either side of their path.

In the northern provinces of China, where less rice, and more wheat, millet, and pulse, are cultivated, the dreadful scourge of famine is less frequently felt; and it is argued by Europeans, that, if the potato were introduced in these provinces, and guinea-corn (*zea-mays*) in the middle and southern provinces, the occurrence

* Page 162. There are still further particulars concerning the *ta-few* manure in 'Mémoires concernant les Chinois,' tome ii., p. 613.

of scarcity might be obviated altogether. An acre of potatoes, it is calculated, will yield more food than an acre of rice, and twice the nourishment. The grain of the prolific guinea-corn is nourishing for man, and its leaves and juicy stems scarcely less so for cattle; and, moreover, like the potato, it is hardy and independent, requiring but little attention after the seed is dropped into the ground.

The implements of agriculture, on which so many of the excellences of agriculture depend, do not seem to be in a very advanced state among the Chinese. The plough they commonly use is a very simple machine, and inferior to the very worst of ours fifty years ago. They have, however, a drill-plough in *Shan-tung*; it consists of two parallel poles of wood, shod with iron to open the furrows; these poles are placed on wheels; a small hopper is attached to each pole to drop the seed into the furrows, which are then covered with earth by a transverse board fixed behind, which sweeps the surface of the ground.* But even their best plough is said seldom to cut deeper than four inches in the deepest and best soils, so that they sow from year to year on the same soil without turning up new earth, and burying the worn-out mould to refresh itself.

Their animals of draught, on which also much depends in agricultural labours, are described as very inferior and weak; and it is said the mules and asses they use in ploughing could not draw our improved ploughs if the Chinese had them. It must be observed, however, that in some provinces of the empire, horses are more abundant and the mules of better quality than what were noticed by Mr. Barrow and other of our travellers, and that an industrious and swarming population may be supposed to do much in the way of spade husbandry.

[To be continued.]

PESTH.

PESTH is the largest town in Hungary, and its situation on the Danube renders it the seat of a considerable trade; the manufactures of silk, cotton, leather, jewellery, and tobacco, being exchanged for the productions of agriculture, which are brought a great distance in boats from places contiguous to the banks. The population exceeds 60,000, about two-thirds of whom are Roman Catholics, and the remainder members of the Protestant and Greek churches. Pesth is the seat of the only university which Hungary possesses, and is attended by above 1000 students. There is a gymnasium, which is attended by about 700 pupils. The University Library contains above 60,000 volumes, and a botanic garden and an observatory are also attached to the University. The distance of Pesth from Vienna is about 113 miles. Buda, on the opposite bank of the Danube, is the seat of the Viceroy of Hungary, and may therefore be considered as the capital; but the meetings of the Hungarian Diet are held in Pesth, and the courts of justice also hold their sittings there. A bridge of boats, 1470 feet long, connects the two places. Mr. Quin informs us, in his 'Steam Voyage down the Danube,' that great improvements have taken place in Pesth within the last twenty years; that it is for the

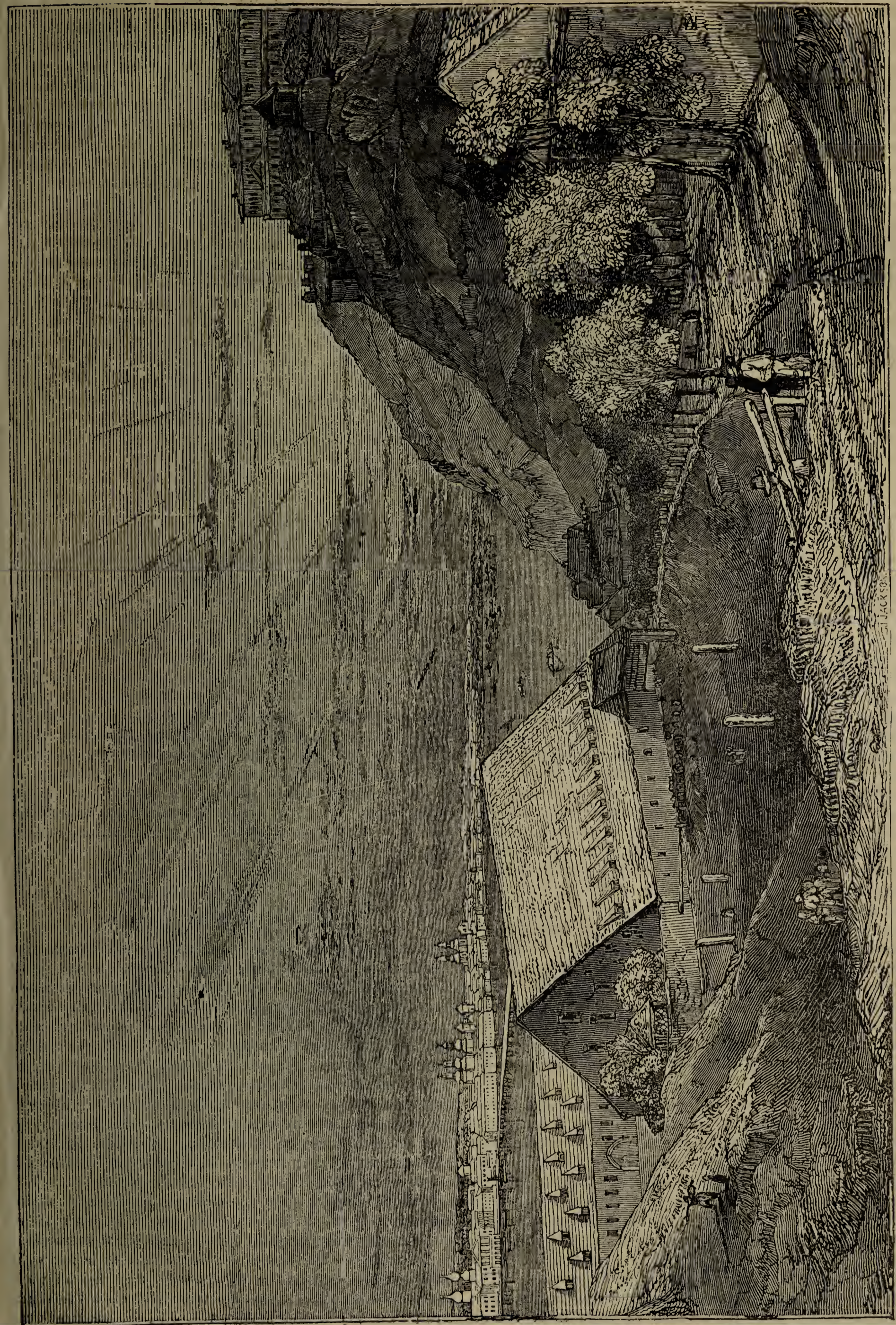
* Father Alvarez Semedo describes this plough with a slight variation. "As I passed by *Honum* I saw one ploughing with a plough of three irons, or plough-shares, so that at one bout he made three furrows: and because the ground was good for that seed, which we call *faggioli* (French beans), this seed was put in as it were in a bushel, or square dish, fastened upon the upper part of the plough in such manner that with the motion thereof the beans were gently scattered upon the earth, as corn falleth upon the mill-stone at the moving of the mill-hopper; so that at the same time the land is plowed and sown." This drill-plough was a novelty to him, and it may be that our idea of that useful machine was borrowed from the Chinese. At all events they preceded us in its invention and use.

most part built in a modern style of architecture; and that several of the public edifices, and even of the private mansions, are splendid. He states that "Presburg is the nominal capital of Hungary; but it has, in the estimation of a Hungarian, one fault which nothing can redeem—it is near Vienna. It has been, therefore, long superseded by Pesth as to all matters which concern the sciences and arts, as well as the assemblages and amusements of the higher classes. Here they spend their fashionable season." Buda is also enlivened by winter gaieties.

The situation of Hungary is between Austria and Turkey, and the national character is in some respects half European and half Eastern. The country east of Hungary was entered about the end of the seventh century by hordes of barbarians coming still farther from the east, and in the ninth century they overspread Hungary. For a century afterwards they were a terror to the whole of the west of Europe, and they extended their ravages as far as Hamburg and Bremen. They violently opposed Christianity, and did not receive its doctrines until the eleventh century. Subsequently Hungary became the bulwark of Europe against the encroachments of the Turks; and severe contests, in which victory decided in favour first of one and then of the other, while they called forth the warlike energies of the Hungarians, retarded the progress of the country, and prevented its enjoying the advantages of commerce and settled industry.

In a battle fought in 1526 Louis II. lost his life, and for a century and a half afterwards a great portion of Hungary can be considered as little better than a province of Turkey, and probably was less favoured than if it had formed an integral portion of that country. Ferdinand of Austria and John Zapolya disputed the possession of the rest of the country, and the Protestants turning the scale in favour of the former, Zapolya retained only Transylvania and some counties of Upper Hungary. The disputes which ensued, not only between these parties but their descendants, enabled the Turks to profit by their dissensions, and it was not until 1699 that they were expelled. Under Charles VI., Emperor of Germany (1711-1742), the crown of Hungary was secured to the female descendants of his house. Maria Theresa endeavoured to improve the condition of the peasantry, and in 1765 promulgated the *urbarium*, or rural code, and a few years afterwards established village-schools. The Emperor Joseph II. zealously exerted himself to reform the Hungarian constitution, and to improve the administration of affairs; but the views upon which he acted were too much in advance of the popular opinions, and his attempts were rendered abortive in a great measure by the opposition of the people. Hungary still enjoys, though a portion of the Austrian Empire, a considerable degree of national independence, through the means of the separate legislative body which it possesses. The Diet consists of the higher clergy, the magnates, the two Courts of Appeal, and two representatives from each chapter, county, city, and privileged district, and is divided into two chambers. The Diet has the privilege of crowning the Emperor as King of Hungary, and also of electing the Palatine, or first officer of the state; and it grants supplies of money and troops. The provincial organization is also favourable to the development of a national spirit. The magistrates of counties are elected every three years by the nobility,—a term which has a wider application in Hungary than in other parts of Europe. The popular principle is applied to the municipal system of the free cities and privileged districts. The powers of viceroy are exercised by the Palatine, also elected; and this officer is intrusted with the general control of affairs, subject to the will of the Emperor.

Notwithstanding the influence of many circumstances



[View of Pesth, in Hungary.]

G. JACKSON.

favourable to the diffusion of equal rights, no such effect has taken place, and the most injurious distinctions are kept up. The nobles are almost entirely exempt from taxes, unless for such portions of their property as are situated within the limits of a free city; they also pay a land-tax, but they pay no tithes, and they are not liable

to many burdens to which other classes are subject. Any violation of their privileges by one of the people renders the offending party liable to severe penalties. The nobles only can possess landed property. Mr. Quin says that "at present the classes of nobles are too numerous, and are becoming more so every day; for it

a nobleman have fifty sons, they are all as noble as himself. Generally speaking, the estate of a nobleman of the second and inferior classes is divided upon his death among all his sons; the result of which division is to produce a swarm of pauper nobles, by whom the country is literally infested." In return for their privileges the nobles furnish the Emperor with levies for the army. Exemptions from taxes are also enjoyed by the inhabitants of many of the free cities and privileged districts. The public burdens therefore fall upon the peasantry, who are completely under the subjection of their lords, whose power, in many instances, extends to criminal cases. Until these remains of the feudal system be swept away, the condition of the peasantry cannot be much improved. The progress of education is impeded, as the nobles fear to undermine the system which enables them to retain and exercise their privileges. There is, however, no censorship of the press established in Hungary; a newspaper is published at Pesth, and the discussion of public affairs is exercised as a matter of right. The laws and the proceedings of the courts of justice are in Latin. The discussions of the Diet were lately carried on in that language, but in this respect some innovations have been made. It is most probable that, owing to the introduction of steam navigation on the Danube, many other changes affecting the social interests of the Hungarians will take place within no distant period. The Danube is not unworthy of becoming the resort of tourists, and it is singular that, considering the greatly increased facilities of locomotion, so few should have visited it.

The Danube (in German *Donau*) has three sources, one of which is in Baden, 2050 feet above the level of the sea. It becomes navigable at Ulm, where the river forms the boundary between Baden and Bavaria, passes through the latter kingdom by Ratisbon and Passau, and then enters the dominions of Austria. Vienna, the capital, is the only place of importance in Austria Proper which is situated on the Danube. Presburg, which is just within the Hungarian territory, is on the left bank of the Danube. The course of the river is nearly due east from Vienna until within a short distance of Pesth, when its direction becomes due south until its approach towards the northern provinces of Turkey. It forms the northern boundary of Servia, and divides Wallachia from Bulgaria. Before it reaches the Black Sea its course assumes a northern direction, and for a short distance is due north. It then takes a western direction, and finally its waters fall into the Black Sea by five different channels. Above thirty navigable canals are connected with the Danube; and ninety rivers and considerable streams from the Black Forest in Germany, the mountains of Tyrol, Styria, Carinthia, Carniola, and Bulgaria, contribute to swell the volume of waters which it carries through so many kingdoms to the sea.

It is probable that the Danube will become one of the principal means of advancing civilization and carrying improvements amongst the various people who dwell on its banks. The free navigation of this great European river is therefore a subject of great importance not only as a commercial question, but as one in which the moral well-being of an interesting portion of Europe is concerned. The introduction of steam navigation on its former solitary waters cannot fail to be rapidly followed by many important results. The voyage by steam commences at Presburg, whence Constantinople may be reached in little more than a week, while the over-land journey usually occupies three weeks. The results of the intercourse which will ensue will be of the utmost consequence; and on this subject Mr. Quin justly remarks, that "when the people come more in contact with foreign nations, their emulation will be naturally excited; they will be induced to im-

prove their roads, to build bridges, to excavate canals, to improve their towns, to give a style to their houses and public edifices, and to civilize their manners. The advantages destined to arise out of his great enterprise" (he remarks in another portion of his work) "to Hungary, to Servia, Wallachia and Bulgaria, and, indeed, to all Turkey, are incalculable. These countries, which have hitherto seemed scarcely to belong to Europe, will be rapidly brought within the pale of civilization; their natural riches, which are inexhaustible, will be multiplied, and their productions will be vastly multiplied."

The regulations which impede commercial intercourse on the Danube may be difficult to arrange in a manner satisfactory to each of the powers through whose dominions it passes; but as their impolicy is not difficult of demonstration, the interests which are involved in them may gradually give way to those of a more enlightened character. It is stated in the German 'Conversations-Lexicon' that Austria subjects the navigation of the Danube to very oppressive restrictions, and that the boatmen from Ratisbon are only allowed to go to Vienna, and they are only allowed to take from thence wine. These impediments are not less injudicious than those imposed within the territory of Turkey. The sand-banks, which obstruct the navigation in some places, may be removed without much difficulty. The project of uniting the Rhine and the Danube, by a canal between the Altmuth and the Maine, near Nuremberg, was one of the grand conceptions of Charlemagne, which, in our day, is likely to be realized. This magnificent course of internal navigation, extending from the Black Sea to the British Channel, if no improper restrictions are imposed, will convey from one people to another an almost boundless variety of the productions both of nature and art. The interchange of commodities which will spring up between the east and west, in the former including those of Asia, cannot but be attended with the happiest social effects. The course of the Danube, from Eschingen to the Black Sea, is above 1800 miles; that of the Rhine, from Lake Constance to Rotterdam, about 900 miles, and there is an uninterrupted navigation through more than two-thirds of its course.

ADVENTURES IN EGYPT.

THE following narrative is taken from the manuscript 'Journal of Francisco Cavaliero Roka,' a native of Leghorn, in Tuscany. His father perished at sea when Francisco was an infant of twenty months old, by which event he was transferred to the care of an uncle, who, like the father, was a sea-faring man. Under his uncle's patronage he made several sea trips from Leghorn to Tunis, and from Genoa to Smyrna. In 1792 his uncle's ship was employed by the Pacha of Tripoli on different services, one of which was to carry supplies to his army, then at war with the Bedouins. Towards the end of 1792 the vessel was stranded in the Bay of Tunis; the following is his own description of this accident:—

"During our stay in the bay we experienced a violent gale of wind, which drove our ship, with many others of different nations, under the great mountains of Solyman, on the west side; those that were not split on the rocks got on the sand-banks, and few of their crews were saved. Our ship was driven on the sand-banks, but lay on her beam-ends, with the sea breaking over her, in consequence of which she leaked greatly. Notwithstanding our misfortune, the climate being warm we were able to endure the hardships of the night. The gale continued the whole of the following day, but the sea did not run so high as to prevent us from coming upon deck; and the carpenter and mate

finding the ship not likely to go to pieces, they addressed the crew, telling them if they swam on shore they would be cut to pieces, as the mountaineers were a savage race of people, called Bedouins, who gave no quarter, recommending them, as the safest way, to conceal themselves in the best manner they could. Accordingly, the mate got one full water-cask, and made it fast on one side of the quarter-deck, with a pump in it; and also another large empty cask, and bored several holes in the side fastened next to the deck. He then took the head out and placed a bucket of fresh water in the cask, with a pump through the bung-hole, in order to deceive those who might come to the cask. The better to conceal me and another boy, the mate directed us to take some biscuit into the cask; after which he fastened the head, so as to give it the appearance of containing nothing but water, desiring us, in case of hearing any noise, to remain silent, which advice we had occasion to call to our aid. We remained until next day, when we were alarmed by the voices and language of those savage barbarians, though we could not understand one word they said; they pumped out some water from the cask we were in, and took the pump out. Our situation at the time they were pumping the water can be better imagined than described. Nothing material happened till the next day, when these barbarians returned again, when we heard a cry as if some human being was put to death. In this dreadful situation we remained at different times about twenty hours; in the night our companions let us out, at which time we got some refreshment; and were careful of not putting anything out of their places, least the Bedouins should observe there was any person on board the ship.

“On the Friday we were frightened by a man coming to the bung-hole of the cask, but he told us in our own language not to be afraid, at the same time telling us his name. He proved to be the mate of the ship. He immediately took out the head of the cask and let us out; and to my great astonishment I found my uncle, who took my hand, and expressed gratitude to the Supreme Being that he was not deprived of all. I informed him of the dreadful situation I had been in for the last five days and nights past. My uncle was attended by the captain of one of the ships which had been driven on shore at the same time with ours; they were going to examine the state of their ships and cargo, and to see if any men were left on board; afterwards it was agreed to go to those ships that had weathered the storm, and then go on shore and see if anything could be saved from the wrecks of the vessels that were there, as at this time we had the assistance of some Tunisian gun-boats and troops, which the Dey had granted us on the application of the consul.”

Cavaliero was afterwards in the service of a French military officer, with whom he went with Buonaparte's expedition to Egypt. Before giving any of his Egyptian adventures, it may be as well to state what became of him afterwards. After leaving Egypt, he went to Malta, and from thence to England, where he entered the service of Admiral Bisset, then into Sir Thomas Hardy's, and, finally, into that of Lord Keith, as steward, when in command of the Channel Fleet. As admiral's steward, he had the opportunity of showing respect and attention to Buonaparte when on board the *Bellerophon*, and received from him, on his departure for St. Helena, a strong expression of thanks, with the decoration of the Legion of Honour.

On Lord Keith's death, M. Cavaliero passed into Lord Maryborough's service as steward, and died suddenly in 1825.

Of the proceedings of the French army in Egypt he gives a lengthened description; but as the principal

events are well known, and from his situation he could know but little beyond what he was immediately connected with, we only give such passages as came under his own observation. After landing the detachment to which he was attached, it advanced to Alexandria, “a distance,” he says, “of about twenty miles over the desert, where the heat of the sand was such that it even penetrated through our boots, and the sun so intensely hot that we were almost scorched on our march. However, under all these difficulties, the army soon reached the walls of Alexandria, the inhabitants, Mamalukes, and Arabs, immediately attacked the advanced guard, but were soon repulsed, and the French entered the town. However, as they were passing through the streets, the inhabitants threw boiling oil, as also water; on the soldiers; and stones and arrows were flying in all directions from the windows, which wounded a number of men and officers, and among the latter was Colonel Broune, the officer in whose service he was, who was wounded in his back by a arrow, of about four feet in length, and of the size of a person's little finger, with a sharp point about three inches and a-half in length, and half an inch in breadth: the arrow I kept for a considerable time in my possession.”

The following is M. Cavaliero's description of the arrival of the French in Grand Cairo in 1798:—

“The cavalry and part of the infantry, after having got possession of the town, were ordered to the village of Boulac, where they found everything convenient both for the men and horses. Colonel Broune's regiment was quartered in one of the Mamaluke barracks, which but the day before were occupied by them. The apartments were most elegantly furnished with carpets, sofas, and everything costly, and decorated with different kinds of warlike instruments. In one of the rooms which Colonel Broune occupied there was a marble pond, of about twelve feet in circumference, with a fountain of fresh water to cool the room, and every other requisite that could be imagined for ease and luxury; but among all this grandeur we were much tormented by mosquitoes and different insects. On our arrival here in July, 1798, Buonaparte issued a proclamation that all private property, of whatever nature, should be respected; but such was the fear of the female inhabitants that it was upwards of a month before we saw any of them. By degrees they gained confidence, and came to market, bringing us many necessaries and comforts. In the September following a body of cavalry was ordered to prepare for embarkation on board the flotilla, for the purpose of pursuing the Mamalukes and Arabs, who had fled, in our last engagement, to Upper Egypt. The regiment of Colonel Broune was one that formed part of this division. The Colonel ordered me to prepare for the campaign, which was done without delay.

“We embarked and proceeded about twenty miles up the Nile, where we landed and joined the main division, under the command of General Desaix; and after marching about twenty hours, we were attacked by the Mamelukes and Arabs, under the command of the following chiefs; namely, Murat Bey, Ibrahim Bey, Solyman Bey, Mustapha Bey, Abudal Bey, Effy Bey, Haslam Bey, Osmand Bey, and Djezzar Pacha. Our army was immediately formed into hollow squares, as there was no other means of engaging them; we had scarcely formed them, when they made a most desperate charge, which broke the ranks. One of the Mamelukes entered the square near where I was stationed. The ferocity of this man was scarcely to be imagined. When he found himself encircled, he fought so desperately, that his sabre was dripping with blood, his horse was in a violent perspiration, and wounded in several places by bayonets, but finding no hopes of escaping, he then

threw his arms on the sand and dismounted, patted his horse's neck, and kissed it. His arms consisted of two pair of pistols, one pair in the holsters, and the other round his waist; a sabre, a poniard, and a steel mallet made fast to the holster, two feet in length, with a round head, having several sharp points about two inches apart: it weighed about six pounds, and was as bright as silver. Several other Mamelukes penetrated the second circle and were killed. General Desaix lost a great number of men, and all by the sabre. So desperate were their wounds, that very few recovered from them. The Mamelukes retreated a considerable distance from us, and we remained in the plain several days. At this engagement I got a very fine Damascus sabre and a pair of pistols, which belonged to one of the Mamelukes, and found them very useful. Here we found the sun and sand ten times as hot as the deserts we passed from Alexandria to Jizzeah; but it is extraordinary that from eleven o'clock at night, until five or six in the morning, the air is so cold that we were obliged to light fires. The country here is in much better order, and produces more abundance of all species of vegetables, &c.; but the inhabitants are not so affable as in Lower Egypt."

He thus describes his return to Cairo, and the sensation produced by the intelligence of Nelson's victory over the French fleet:—

"When we came within a day or two's march of Cairo, we had the sorrowful intelligence that the fleet that brought us from Europe was taken and destroyed by the English fleet. This was most distressing intelligence to us all, as our hopes of returning to Europe were at end. In November, 1798, we arrived at Grand Cairo, and the cattle were sent to Jizzeah and Boulac. On our entrance to Grand Cairo, we observed sorrowful countenances among the troops: they were so much affected with the loss of the fleet, that you could get none of them to speak. From hence Colonel Broune was ordered back to his former quarters at Boulac. On our arrival here we found Buonaparte did not enjoy a good state of health, and had retired to a small island about a mile distant, in the middle of the Nile, where a large house had been erected for him. This island is inundated every year by the overflow of the Nile."

SHOOTING STARS.

[From a Correspondent.]

HAVING read in the 'Penny Magazine,' and in various other publications, accounts of the appearance of what are there termed shooting stars, which happened in North America on the morning of the 13th November, 1833, and as such accounts are in many respects erroneous as to facts and, in my humble opinion, as to the causes; I, having been myself an eye-witness of the phenomenon in question, think it but right, in aid of science, to give a statement of such circumstances as came within my observation, the truth and correctness of which may be relied upon, leaving it to more enlightened minds to find out the operating cause of such occurrences.

Having awoke about an hour before daybreak on the morning of the 13th November, 1833, it being then dark, with the exception of the stars (the moon then about two days old), I was surprised to find a constant flashing of light in my room, as if from the flickering of a dying lamp, or from faint flashes of lightning; and, as the window-blinds were down, I arose and went to one of the windows to ascertain the cause; when, lifting up the blind, I was astonished to find it literally raining fire, coming down like a smart shower of snow or rather hail. I immediately roused the whole of my family to

witness the phenomenon, and then throwing on a few clothes, hurried out of doors to observe this great event more minutely. Upon going out and finding this apparent fire to be perfectly harmless, I began to examine its peculiarities. I found that this shower of fire consisted of globules varying in size generally from a pea to a hazel-nut, with here and there a few as large as pigeons' and hens' eggs, and one in particular which fell about twenty feet from me was nearly the size of my fist. They all came down in a regular uniform slanting direction from south to north at an angle of about 30° from the perpendicular, not crossing each other, but falling gently until within about five or six feet of the earth, then bursting and throwing out in a horizontal direction towards the north a stream of light, comprising all the prismatic colours, the brightest and most beautiful that can be conceived, and then vanishing gradually. The largest before-mentioned I noticed in particular, which in its relative position from me had a dark forest in the back-ground, whence I could observe it to greater advantage, and from its size was slower in descending, bursting, and vanishing. This one threw out a bright belt or stream of many colours, apparently a foot broad, perfectly horizontal, about eight feet from the earth, reaching entirely across a meadow until it touched the woods, the space being there by measurement 175 yards, it then vanished very gradually, occupying from four to five seconds from first to last. I continued watching the phenomenon until the day breaking rendered them indistinct, and at length no longer visible; but I have no doubt they continued falling for a considerable time after, and until the atmosphere became rarefied by the sun's rays.

It will here, perhaps, be proper to give some account of the state of the weather, and of the atmosphere immediately preceding and during the above event. The period when this phenomenon occurred was what is called in America "the Indian summer," which generally begins in the early part of November, and continues for one or two, or even three weeks, during which time the weather is perfectly calm and warm both by day and by night, with a hazy, smoky appearance in the day-time; and in the afternoon of the 12th there fell a light gentle rain, which lodged like dew on the grass, and continued for about half an hour, after which it cleared up and presented a calm, clear, warm, starlight night. On the morning of the observation I laid my hand on the bare ground, which felt comparatively warm, and on looking at my thermometer found it standing at 66° Fahrenheit; but as I had no barometer I cannot state what the pressure of the atmosphere was. The above observations were made on a farm about six miles north-west of Baltimore; and upon conversing with others on the subject, I learnt that the phenomenon extended southward all over the State of Virginia, where it was still more brilliant, and north-eastward to Philadelphia, where it was fainter, but was not visible at New York; for going to the latter city a few days after I made many inquiries, but could find no one who had either seen or heard anything of it.

In one of the accounts I read, some attempt is made to count the number of stars, as they are called, that fell; but from what I saw it would be as easy to count the number of flakes of snow or hail-stones during a moderate fall.

* * * The Office of the Society for the Diffusion of Useful Knowledge is at 59, Lincoln's Inn Fields.

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PORCUPINE.



[The Porcupine.]

As the general characters upon which the Rodentia as an order are discriminated from all others are very manifest, and have been previously alluded to, we shall here content ourselves with observing that these animals are divided into two great groups, distinguished, the one by the presence, the other by the absence of clavicles. The clavicles, or collar-bones, by their presence or absence influence materially the degree of motion enjoyed by the arms or anterior limbs. Where these bones are present, as in man, the monkey, the bat, the mole, armadillo, &c., we find a considerable freedom of action, and this necessarily, because it is by these bones, one end of which is attached to the upper part of the breast-bone, the other to a projection (coracoid process) of the shoulder-blade (scapula), that the shoulders are kept fairly out from the chest. They act as props to the shoulders, preventing them from being drawn inwards upon the sides of the chest by the action of the pectoral muscles; hence there is allowed an arrangement of muscles for giving to the arms that extent of motion which we see in man and in the monkey. In all other clavicated animals it is more circumscribed, according to their necessities. Now as it regards the Rodents, we find some, as the squirrel and the rat, enjoying a very considerable share of motion in the fore limbs, independent of that necessary for simple pro-

gression. The squirrel, for example, sits up on its haunches and holds a nut, or other article of food, between its fore paws, while it works upon it with its teeth; it cleans its face and whiskers, and grasps the boughs of the smooth-barked beech with its little vigorous paws, as it frolics among the woods. Those who have quietly watched the gambols of the little mouse, when, unsuspecting of an enemy, it sports around the hearth, cannot but have noticed how freely it uses its paws. Indeed a free use of the paws implies the presence of a clavicle; where no such use exists, as in the horse, sheep, ox, &c., there is not the slightest rudiment of these bones. To confine ourselves to the Rodents, we may proceed to remark that in those of this order which do not possess clavicles, as the hare, cavy, capibara, and porcupine, or which possess them in a mere rudimentary condition, we find the action of the paws restricted; neither the hare, cavy, nor porcupine enjoy that freedom of arm, or use of paws, which the squirrel and the rat possess. On the other hand, however, they are not so restricted in these respects as are many other unclavicated mammalia; and, in like ratio, their fore limbs are not so exclusively mere pillars of support and organs of locomotion. The fact is that in all Rodents (witness the hare) the great development of muscular force is in the hind-quarters; hence the ease with which

they sit up, and hence, in connexion with their comparative shortness, is there allowed to the arms, of even the unclavicated Rodents, the utmost freedom of which such a structure can admit. The paws, however, have lost all grasping power, that grasping power which the squirrel possesses,—that facility of holding anything, not in one paw, but between the two. The arrangement of the muscles, owing to the absence of the clavicles, forbids the attempt; the hare or cavy may indeed sit up and clean the sides of the face, but they attempt to hold nothing to their mouth; yet are their fore limbs by no means unadapted for excavating the ground: many indeed live in burrows which they work out in the soil, and drive galleries of great length, ramifying in various directions. The rabbit is an instance in point. The rabbit, however, works in soft or sandy soil; its limbs are deficient in that degree of strength requisite for more laborious operations; it is fleet, light, and active, and in these respects very different from the porcupine, a burrowing unclavicated Rodent, slow and heavy, but endowed with great strength of limb.

Altogether the porcupine is one of the most remarkable of the order Rodentia. Without any pretensions to grace or beauty, destitute of the active celerity of the squirrel, the speed of the hare, or the exquisite fur of the beautiful chinchilla, it nevertheless proves an attractive object in every menagerie. The curiosity and interest it excites are owing, no doubt, to the *chevaux de frise* of spines with which it is covered, and to the belief, not long since universally entertained, and even now not altogether relinquished, that it was capable of launching these darts with effect against an adversary. Into this error writers of ancient and modern days, and even travellers of distinguished talents, have fallen; no wonder, then, that the generality of persons should have concurred in its reception. Aristotle, Pliny, and Oppian, record it as a fact: Aldrovandus adopted it. It is seriously alluded to by the anatomists of the Academy of Sciences of Paris*; and Bosman† says, “when the porcupine is enraged, it springs with extreme rapidity (having its spines all arranged, which are often two palms in length,) on men and beasts; and it darts them with such force, that they are capable of piercing a plank.” All this is a tissue of error,—yet, as with many other popular errors, there is a colour for its origin. When irritated, or called to act upon the defensive, the porcupine, unfurnished with teeth or talons for the combat, turns his back towards his enemy, buries his head between his fore-limbs, erects his quills, and shakes them violently, their agitation producing a rustling sound. If the assailant advance to close quarters, the porcupine pushes backward against him, and that suddenly and with great energy, so as to force the sharp points of the spines into his flesh, and inflict a most painful wound. Now the quills of this animal are but slightly attached to the skin, and when clashed together, it often happens that one or two, more loose than the rest, or about to be shed, are thrown off; and also that, when thrust into any object, they are very likely to remain fixed in the wound, instead of being withdrawn as the animal moves away. From these circumstances it is probable that the fable of the spear-darting powers of the porcupine took its rise.

As we have adverted to the clothing of this animal, by which it is so peculiarly distinguished, we shall here proceed to describe it in detail. The porcupine is not the only spine-covered animal among the class of mammalia,—to say nothing of several species which enter into the same group with itself, as the Canada porcupine, the fasciculated porcupine of India, and others,—the same clothing is allotted to the hedgehog, that

timid, harmless little wanderer through our woods and copses,—

——“when day declining sheds a milder gleam.”

It is also given to the *tanrec* of the Mauritius, and, still more fully, to the *echidna* of Australia. Even in the scale-bearing manis we see a modification of the same defensive armour. The spiny clothing, however, of the porcupine has its peculiar characters; it differs in its details from that of the hedgehog and echidna, as, in the two latter, that of each has its own arrangement. It is the back of the porcupine only that is furnished with a panoply of spine. The head is ornamented with a long crest of slender tapering bristles, capable of being elevated or depressed at pleasure; and the fore and hinder limbs, as well as the under parts of the body, are clothed with stiff, short bristles, of a black colour, lying close upon the skin. The dorsal spines are of two kinds: some, which seem intended to form a sort of cloak to the others, are very long, weak, and slender, and incapable of inflicting injury; the main bed of spines, however, consists of shafts of great strength and solidity, from four to seven or eight inches in length, thick in the middle, and tapering to each end. The end inserted into the skin is formed into a small pedicle, the other end is extremely sharp and prolonged. Thus, by the action of a subcutaneous muscle, of great extent and considerable thickness, termed *panniculus carnosus*, the animal is capable of raising them, clashing them, or depressing them at pleasure. In their ordinary state, they lie nearly flat upon the body, with their points directed backwards, but, when elevated, they radiate in every direction. If we take one of these spines and examine it, we shall find that, in structure, it closely resembles the shaft of a quill-feather, except that it is more dense and hard; but internally it consists of a pithy substance, invested with a coat of hard enamel, of which the point is entirely composed. On looking at the point more narrowly, we shall see that it is somewhat flattened, so as to present a sort of slight double edge, or raised line, the one opposite the other, and these edges are minutely jagged, the whole constituting a weapon of no trifling nature. Not only is the wound it inflicts very painful, but it is often very serious. We know of an instance in which a person was struck through the boot and severely wounded, the injury being attended not only with great inflammation, but presenting for a long time a very threatening appearance.

The spines of the porcupine are elegantly ringed with broad bands of black and white, and they make convenient “sticks” for camel-hair pencils, steel pens, &c.

The tail of the porcupine is short, and indeed can at first scarcely be seen amidst the spines, which fall over it; when these are elevated, however, it is plain enough. It is not covered with spines, but with a crop of open hollow quills, each supported by a slender tremulous footstalk, vibrating with every movement. When agitated, they produce a rustling noise not unlike that produced by the tail of the rattle-snake.

Thus invested with weapons of defence, the porcupine leads a quiet, inoffensive life, seeking to injure nothing, and only formidable when assaulted by enemies. It leads a solitary life in obscure and lonely places, digging for itself a burrow with many openings, in which it reposes during the day. Night is its season of activity. The approach of darkness invites it from its retreat to wander in search of food; this consists of roots, herbs, bark, and other vegetable aliment; its strong and large incisor teeth enabling it to gnaw the hardest substances with ease. Capable of digging even in the firmest ground, its limbs are extremely muscular, and the claws are short, thick, and strong. The fore feet are divided into four distinct toes; a claw

* See ‘Mémoires pour servir à l’Histoire des Animaux,’ tome iii., p. 114.

† See his ‘Voyage en Guinée,’ 1705.

indicating the rudiment of a fifth; on the hinder feet the toes are five in number.

The common porcupine (*Histrix cristata*, Linn.) is a native of Africa, but it is found also in several parts of Italy (near Rome and among the Apennines) and also in Spain. According to the best information, however, it is not originally indigenous in Europe, but has been imported; indeed the European specimens are inferior in size and in the strength of their spines to those of Africa, the climate of which is more congenial to their nature. In Europe they are said to undergo a partial hybernation, remaining torpid in their burrows during the severity of the winter, and appearing early in spring; but we are not aware that this takes place in Africa, indeed we have reason to suspect the contrary. Colonel Sykes, in his 'Catalogue of Animals from the Dukhun,' observes, that the Indian porcupine "appears to be distinct from the European species, which it closely resembles in form and covering. It is nearly a third larger; all the spines and tubes of the tail are entirely white, which is not the case in the *Histrix cristata*. The spines of the crest are also so long as to reach the insertion of the tail. The ears are much less rounded, and the nails are shorter, comparatively deeper, and more compressed with deep channels below. The white gular band is more marked; and finally the Asiatic species is totally destitute of hair: spines were wanting, being replaced by strong bristles even down to the nails. This species is abundant in Dukhun, and is very good eating. Like the African porcupine, when alarmed or irritated, it shakes the tubes and spines of its tail violently, producing a startling noise. It stamps also with great energy with its hind feet, and when it assails an adversary, it runs obliquely backwards, transfixing the foe with its spines."

In captivity the porcupine is dull, stupid, and inactive; it discovers no intelligence, and never becomes familiar. It has, however, bred in the Gardens of the Zoological Society. The length of the African porcupine is about two feet, its head is thick, the muzzle blunt, the eyes small. Its voice is a low grunt, uttered when teased or irritated.

PICKEREL-FISHING.

[From a Correspondent.]

THE fish known by the name of "pickerel" is evidently of the pike species; for it is not only shaped and marked like the pike, but its haunts, its habits, and its disposition, are all very similar. Its flesh, both in taste and appearance, very much resembles the flesh of that fish. But in situations the most suited to the perfecting of its growth, it never attains a large size: for in all my angling experience, the largest I remember ever to have met with was but eighteen inches long, and weighed a little short of five pounds; but three or three and a-half pounds is considered a fair size. This fish is found in many of the ponds and lakes in various parts of the British Colonies in North America, as well as in the eastern and northern sections of the United States. It is not, however, exclusively a lake-fish; for in a few of the rivers of that country, particularly far into the interior, pickerel is known to abound. It is not any superiority this fish possesses over the grey or salmon-trout, the different sorts of bass, or the delicious white fish, that has obtained for it a high and universal reputation,—for some of the other kinds are decidedly superior to it,—but owing, I believe, to its affording both food and amusement at a season when few other fish are taken in the situations where it most resorts;—for it is during the coldest of the winter months that pickerel-fishing is generally followed. It is true that it is sometimes caught in summer, while

the fisherman is angling for other fish; but then so many different sorts are equally or more abundant, and more easily taken, that pickerel-fishing may be considered quite out of season.

The small lakes in which the pickerel is most generally found are frozen over during the month of December, or in the early part of January; and it is after the ice becomes strong that the pickerel-fishing commences. If there is a covering of snow upon the ice, so much the better; for it serves to darken the water below, whereby the fish are rendered less shy and circumspect in approaching the places where hooks are set.

Preparatory to the commencement of pickerel-fishing, the person calculating upon undertaking this business—or amusement, if he conceive it such—must prepare his hooks and his lines, and have a supply of very small live fish with which to bait his hooks, if he intend to make a regular and successful adventure. Some persons, either too indolent or too negligent, use small pieces of fresh pork as a substitute for small fish; but I am aware from my own experience, and also from the experience of much older fishermen than myself, that there is no bait nearly so successful as the small live fish. Being prepared with the necessary number of lines,—and one person, if the pickerel are not in an extraordinary humour for biting, will be able to attend to about thirty,—the fisherman sets out for some neighbouring lake; and the first thing he attends to on reaching it is to select favourable fishing-ground; for it must not be supposed that every part of the lake may happen to be equally so. No such thing; for in some of those lakes that afford most excellent pickerel-fishing, there are probably not more than three or four small spots where a set of lines would be worth attending to. The fish seem to have their peculiar haunts, and it is well known that they always move in shoals; and it has also been observed, that after frequenting a favourite spot for a number of years, the whole of them will leave it, and resort to some part of the lake that has not heretofore been considered as regular fishing-ground. Having fixed upon his ground, the next thing he does is to cut as many small holes in the ice (probably four or five inches square) as he purposes placing lines in. If the ice be very thick, he uses an axe for this operation; but if it be but moderately so, a narrow instrument, formed somewhat like a spade, answers the purpose much better. He regulates the length of his lines by the depth of the water, taking care to avoid coming in contact with the bottom; and in order to secure his lines on the surface of the ice, he is prepared with pieces of any sort of timber, three or four feet long, and of just enough substance to admit of auger-holes through the middle, wherein a small cross-stick is fixed, one end projecting through the hole but four or five inches, while the other end may be of indefinite length, but commonly from ten to fifteen inches long. The larger stick being placed over the hole in the ice, the line is then fastened to the short end of the cross-stick, descending fifteen or twenty feet into the water, as the case may require. The machine is then left to itself,—but the anxious eye of the fisherman is ever and anon directed towards it; for the moment a fish seizes the bait, and pulls but slightly upon the line, the end of the cross stick to which the line is attached is drawn downwards, and the larger and longer end is brought perpendicularly over the hole. The carefully-attentive fisherman instantly obeys the signal, for he is certain that a fish has seized the bait.

It is not an easy matter to attend to thirty lines of this sort; for as it would not answer to place them very near each other, that number would probably be distributed over a superficial area of half an acre at the least. Sometimes the ice is so slippery that the fisherman finds it difficult to move with the velocity and

precision he would desire; and it is often ten to one that he overruns his mark in his extreme anxiety to reach the little moving or perpendicular cross rod, that warns him that a pickerel is biting. When there happens to be a hungry shoal of the fish in the vicinity of the thirty lines, there is amusement enough, and anxiety enough, and labour enough, in managing the business in a proper manner. But it is a miserable business on a cold day, when the thermometer is down to zero, and a keen skinning breeze drives the snow along the surface of the lake, filling up the small openings where your lines are once every five minutes, and the fish declining to have anything to do with the baits that your benumbed fingers have mangled and fixed improperly on the hooks;—and when at last you give it up in despair that nothing more can be done, that the pickerel will not bite, but that the frost *will*, oh! the misery of collecting thirty long wet frozen lines, and bagging the few straggling fish that you may have caught in the morning! Fires are often lighted by the pickerel-fishers, but when the weather is boisterous they are but of little utility, for you are obliged to get to

windward of them, and therefore experience little or no benefit. After all, on a fine winter day, when the pickerel are in humour—as the fishermen say—I have seldom enjoyed anything so much as a day's pickerel-fishing.

In those parts of the country where there are numerous small lakes, it generally happens that these fish, in the first settlement of the country, are found in but very few of them. The cause of this, of course, has never been ascertained; but as the country has become peopled, the inhabitants have introduced them into almost every lake. I was the owner of a small lake wherein were no pickerel, but some of my kind neighbours took upon themselves to introduce a dozen from a lake at a few miles distance; and in three years from that time my lake was as full of good-sized pickerel as any of them. And it has been generally remarked by all pickerel-fishers that these fish grow to a larger size in their new habitations than they ever did, or at present do, in the lakes in which they were found when the country was first discovered.

CAVE OF SANTA ROSALIA.



[Interior of St. Rosalia.]

A LITTLE to the west of Palermo, and nearly at the summit of the lofty and rugged Monte Pellegrino*,

* For the form and position of this mountain see 'Penny Magazine,' No. 286.

there is a natural grotto or cave of considerable extent. Hamilcar Barcas, whose Carthaginian soldiers are said to have made a barrack-room of the cave, long resisted the Romans on this isolated and almost inaccessible

height; but it is not from these circumstances that the grotto is dear and sacred to the Sicilians. The mouth of the cave no longer opens on the mountain's side, but is masked and enclosed by a curious church they have built round it. Crossing this church, you enter a low, narrow vault under the rocks—cold and gloomy in the extreme, where silence is never broken, except by the low whisperings of the devotees, or the echoes of the service in the church. Nearly at the extremity of the cavern there is a beautiful young maiden in a reclining posture, with her half-closed eyes fixed on the cross. It is only a statue; but in the dim obscurity, partially broken by the lights from some small silver lamps, it looks, at a certain distance, like a human being in the act of expiring with beatific visions of a brighter and happier world than this. Even on a nearer approach, when the illusion vanishes, the effect of this exquisite piece of workmanship is exceedingly touching. The delicate beauty and youth of the countenance, with its mingled expression of simplicity, resignation, and devotion—the flowing lines of the body and limbs, with their soft and perfect repose, quite captivate the beholder, and almost excuse the idolatry of which the statue is the object. The head and hands are cut in the finest Parian marble; the rest of the figure is of bronze, gilt, appearing as if covered with a robe of beaten gold. Many valuable jewels testify the devotion of successive ages.

The figure represents Santa Rosalia, the patroness saint of Palermo, who is believed to have lived and died "in these deep solitudes and awful cells." According to the legend, this beautiful virgin was niece to King William the Good, a prince of the Norman line, who reigned in Sicily from A.D. 1150 to 1154, and who was succeeded by his son, surnamed William the Bad, under whom the island became the scene of civil wars and all kinds of iniquities. Even from infancy the young princess showed symptoms of sanctity; and in the sixteenth year of her age, seeing the wickedness of the world, she deserted it altogether, and retired to the solitary mountains. When she disappeared (in 1159) the people thought she had been taken up to heaven, deeming her soul too pure, and her body too beautiful, to be subjected to the ordinary processes of mortality. Tradition states, that she at first retired to a mountain cave at a considerable distance; but being disturbed in that retreat, she wandered to Monte Pellegrino, and discovering this grotto, fixed her residence here as a less accessible place.

Nothing more was heard of her till her bones were found, nearly 500 years after her disappearance, on the very spot where her statue now reposes. A miracle was, of course, connected with their discovery. In the year 1624 Palermo was visited by a dreadful plague, which no human means could moderate: a holy man had a vision, and he told the people that the saint's bones were lying unhonoured in a cave near the top of Monte Pellegrino; that if they were taken up with due reverence, and carried in procession round the walls of the city three several times, the plague would immediately cease. A deputation was sent to the mountain—the bones were found in the place indicated—the processions were performed—the people were cured—and the fair Rosalia was elevated to the rank of tutelar Saint of Palermo. The bones, preserved in a silver box, curiously wrought and enriched with jewels, were deposited in the ancient cathedral of the city; but proper care was taken of the holy grotto, and a magnificent causeway, and then a fine road, in terraces, rising above each other, and very properly called *La Scala* (the Stairs), were made to lead to it, over the rugged heights and along the precipices of the mountain. Besides the church, a residence was built for a few officiating priests, who are bound to be constantly on the spot to celebrate mass, show the cave, and receive the

offerings of pilgrims; and in process of time a small *taverna*, or house of entertainment, arose in the vicinity, to afford refreshment to the numerous visitors who generally require it after their toilsome ascent. The church, the cave, the shrine, are seldom found without kneeling devotees. At certain seasons the sailors and poor people from Palermo, and the peasantry from the neighbouring country, flock hither in numerous troops, and, according to a practice which is general at such places in Italy and Sicily, after they have performed their devotions they give themselves up to enjoyment—to feasting and dancing for the rest of the day. The view from Monte Pellegrino is at once cheerful, diversified, and sublime, extensive and beautiful in its details. The fair city of Palermo, with its suburbs, *La Bagaria* and *Il Colle*, full of villas and gardens, is close under the eye; the upper sides of Mount Etna, though at the distance of nearly the whole length of the island, are visible; and looking seaward, most of the Lipari islands, with the ever-smoking cone of Stromboli, are discovered.

The festival of Santa Rosalia is the most splendid religious pageant in Sicily, and, according to the Sicilians, whose pride and boast it is, the finest in the world. It is held annually at Palermo, in the glowing month of July, and lasts five days, the anniversaries of the finding of the bones, their transfer from the cave to the cathedral, and the three processions round the walls of the city. People repair to it from all parts of the island, from the neighbouring coasts of Calabria, and (in smaller numbers, which have been increased since the establishment of steam-packets) even from the city of Naples. A detailed account would occupy some pages of our Magazine; but the principal features of the festival are these—a lofty car of an exceedingly elegant form, and richly ornamented, is surmounted at more than the height of sixty feet by a statue of the saint, in silver, and considerably larger than life. The car is about sixty-five feet long, and thirty feet broad. On seats which rise above each other like stairs, a numerous orchestra and vocal performers are disposed in rows and in full court dress. This enormous vehicle is dragged slowly through the centre of the town by fifty white oxen. It stops every fifty or sixty yards, and at each pause the music, which is generally admirable, fills the summer air, which is otherwise sweetened by incense, and the breath of innumerable flowers, that are suspended to the car or scattered before its path. In the evenings the Cassaro, or principal street, and the long and beautiful promenade of the Marina, are splendidly illuminated, and fireworks on a very extensive scale are let off. In these arts the Palermitans particularly excel. Horse-races through the crowded streets, like those we have described at Rome*, are added to the amusements. On the fourth evening the interior of the fine old cathedral is filled with one blaze of light; the silver lamps, the wax torches, the candelabra, the mirrors, the rich hanging draperies of gold and silver tissue, and all other accessories, being arranged with admirable taste and effect. The festival concludes on the fifth day with a procession, in which the effigies of all the saints in Palermo are carried, amidst a deafening noise of drums, trumpets, and patereroes. A part of the countless assemblage of people file off from the Marina, and take the steep road of Monte Pellegrino to the grotto of Santa Rosalia.

HUTTON'S LIFE, WRITTEN BY HIMSELF.

WE scarcely know in English or foreign literature a more interesting or improving specimen of autobiography than that of the venerable William Hutton, late bookseller and stationer at Birmingham. It is full of example and encouragement to that vast majority of mankind whose inheritance is poverty and hardship,

* See No. 102.

and whose only hopes for the attainment of comfort, ease, and independence, lie in their own unaided exertions and their own good spirit. From the very depth of poverty, and from a state of neglect and abandonment, which we trust is becoming less common among us, as parents are better impressed with a sense of their duties and the vice of drunkenness declines, this strong-minded man fought his way up to wealth, and to no mean degree of literary fame, which, after all, is a thing worth obtaining, and must be doubly dear to one who has been his own teacher, and has acquired his knowledge under the pressure of the heaviest difficulties. In worldly matters the race is not always to the swift, nor the battle to the strong; but there is many a point far short of the winning-post, well stocked with comfort, which the sober and persevering may be almost sure of reaching. After a time there is a self-satisfaction in the very struggle; and the consciousness of self-denial—the abjuring of a present mean indulgence for the sake of a future and higher good, is perhaps the next sweetest thing to the possession and enjoyment of the good itself. In William Hutton's case, some of the happiest moments of his life seem to have been those in which he passed through his hardest struggles; and he carried a cheerful, reconciling, and hoping spirit through them all. When he could not eat meat he ate bread, and when he could not get white bread he thought brown bread very good. When condemned to wear an old coat for five years, he covered over its patches with the bright prospect of the glossy new coat he was working and saving for, and which he knew would be his—some day. When, being too poor to pay even for the conveyance of a common waggon or carrier's cart, he made long and painful journeys on foot, he thought walking was best for his health; and so it most decidedly proved, for it strengthened a constitution originally weak and puny—it counteracted the injurious effects of long confinement at the silk-mill and the weaving-frame—and mainly, by this acquired and steadily-maintained taste for pedestrian exercise, he was enabled to attain the unusual age of ninety-two.

In another essential point Hutton stands as a shining example. When the race, after many a hard year's labour, was fairly won, he showed no triumph or conceit; but was grateful, and as modest as when he knew the bitterness of other people's bread, and of waiting at other men's doors. His wealth did not make him purse-proud (that most repulsive of all prides); and the consideration in which he was held by people of condition and rank, did not make him ashamed of the lowness of his origin or of his poor relations. It is the opposite of this latter feeling that too often renders the lowly man that has risen in the world wretched to himself, and odious and ridiculous to other men—that throws wormwood and gall into the brimming cup of prosperity. This defect, which is rather more prevalent in England than in other European countries, is nicely touched by Hutton, in describing an aunt of his who rose from the silk-mill at Derby to be the wife of a squire at Standbach, in the county of Hereford; and who, in other essentials, was a good, respectable, and sensible woman. "She was so ashamed," says her nephew, "of her mean origin, that it was kept a profound secret from the world, and particularly from the neighbourhood where she resided. Nay, her children knew no more of her life before marriage than the children born in Egypt. The more she endeavoured to conceal it, the more the neighbours tried to make the discovery. This proved a continual worm upon the mind. As poverty is no crime, she ought not to have been impressed with shame. Her smile would have disappointed malignant reflection. She severely prohibited a visit from her relations, except they could appear in a genteel style, and even then they were enjoined silence. My father, in a momentary effusion of

love, mentioned a visit. 'She wished he would come well dressed, and on horseback, because all her husband's relatives *were genteel*.' My brother once visited her on foot; his reception did not strike him with joy. She understood I kept a horse. 'Why did not William come?' Had I visited her in my carriage, I must have been received with open arms."

Even as a literary composition, Hutton's Autobiography has great merits: he condenses much meaning in few words; he describes events with astonishing vivacity; he is playful and pathetic by turns; his quiet drollery never misses the mark; and his deep, short, quick pathos affects us like Crabbe's poems. Here, too, all is real, simple, and *naïve*, without any aiming at effect; and this makes the effect produced the stronger.

Although the book is not of an ancient date*, and is of an essentially popular and useful character, it is now scarce, and is probably altogether unknown to many of our readers. We will therefore endeavour to give a just notion of it, trusting our young friends will lay the examples and lessons it contains near to their hearts.

William Hutton was born September 30, 1723, at the bottom of Full Street, Derby. He says, "There were no prognostications prior to my birth, except that my father, the day before, was chosen constable. But a circumstance occurred which, I believe, never did before or after, the purchase of a Cheshire cheese, price half-a-guinea; so large as to merit a wheel-barrow." He tells us his mother said he was a very ordinary child, which is "a softer word for ugly." One of his earliest recollections was that of his being left to play, when quite an infant, with his brothers and sisters (of whom there were many), and other boys and girls, on the verge of the river Derwent, where he wonders he was not drowned.

"At Mount Sorrel," he says, "I had an uncle, who was a grocer, and a bachelor; also a grandmother, who kept his house; and at Swithland, two miles distant, three crabbed aunts, all single, who resided together as grocers, milliners, mercers, and schoolmistresses. My family being much distressed, I was sent over, and I resided alternately with my uncle and my aunts fifteen months. Here I was put into breeches at the age of four; here I was an interloper, and treated with much ill-nature. Nothing is more common than for people, particularly young women, to be fond of children; but I can recollect numberless instances of insult, and not one civil thing they ever said. 'You are an ugly lad, you are like your father: your brother is a pretty lad, he is like his mother' (she was their sister). I was unable to return an answer. They might have considered that this and other evils were out of my power to remove."

On a certain occasion one of these unkind aunts took William to an ale-house, and there *she* "got so completely drunk that she could neither stand nor walk." But still they had to get home. "We passed on without resting, and my aunt during this little journey fell down, perhaps, twenty times, and generally at a stile; often lay a minute or two, and bade me look if any person was coming. I answered 'No,' but the answer was useless, for I was scarcely able to look over a blade of grass. No damage ensued, except my being terrified." Scenes of this sort, which were unhappily familiar to Hutton in early life, seem to have produced the only good impression they could on his mind—they disgusted him with drinking. At length he returned from the alien roof of his aunts to his own home.

"My father," he says, "who had not seen me for fifteen months, received me with only two words, and those marked with indifference,—'So, Bill.' To account for this indifference, it will suffice to say that his father had learned to prefer the ale-house to his home, and

* It was published by his daughter, Catherine Hutton, in 1816, in 1 vol. 8vo.

was generally besotted. What follows might have been written by Fielding and painted by Hogarth.

"Being four years and a half old, and dressed in my best suit, a cocked hat, and walking-stick, my sister took me by the hand to Gilbert Bridge's, for the evening's milk, which was in future to be my errand. One of his buxom daughters, in a gay mood, snatched off my hat, and laughed at me, as one who wins. I gave her a blow with the knob end of my stick; she returned the hat in a more serious tone, with, 'The young rogue has hurt me,' and from thence gave me the name of *Smiler*."

The comedy is soon followed by tragedy. "I now went to school to Mr. Thomas Meat, of harsh memory, who often took occasion to beat my head against the wall, holding it by the hair, but never could beat any learning into it: I hated all books *but those of pictures*." [There have been Thomas Meats of a later date than 1728, and who have been allowed to exercise their brutal severity on children of a higher condition than poor Hutton; but we trust this breed of schoolmasters is almost extinct.] "Now a brother John was born, but soon left us, by which he escaped that distress which awaited me."

With his bad habits, the earnings of the father, who was a journeyman-woolcomber, could scarcely keep the wolf from the door, and the number of mouths kept increasing. "Consultations were held (that is, when he was *six years old*) about fixing me in some employment for the benefit of the family. Winding quills for the weaver was mentioned, but died away. Stripping tobacco for the grocer, in which I was to earn fourpence a week, was proposed; but it was at last concluded that I was too young for any employment." The very next year, however, he was put to hard work at the silk-mill, being the youngest, and far the least, of 300 persons employed there. He was indeed so diminutive, that the superintendents put him on a pair of high pattens, which were tied fast about his feet, to enable him to reach the engine. He continues:—"I had now to rise at five every morning, summer and winter, for seven years;—to submit to the cane whenever convenient to the master;—to be the constant companion of the most rude and vulgar of the human race,—never taught by nature, nor ever wishing to be taught."

Hutton dots down his juvenile recollections year by year: the next year, when he was slaving in the silk-factory, and not yet eight years old, opens in a singularly-touching manner. The vapid incidents of novels and romances, with their fine-spun sentimentalities, have nothing equal, nor have the better flights of poetry anything superior, to this:—"1731. March the 11th, was born, quite unknown to me, at Aston-upon-Trent, six miles east of Derby, a female child, who, twenty-four years after, was to become my wife,—be my faithful and dear companion,—and love me better than herself. I was to possess this inestimable treasure forty years, then to lose it, and mourn its loss every future day of my life. There does not exist in man a thankfulness proportionate to the long enjoyment of a valuable favour;—but there does exist a regret at the loss equal to its magnitude."

But poor Hutton had many days of misery to undergo before winning or losing anything so precious. In this same year (1731) there is a little incident which strongly marks his forlorn condition, and which may serve as a specimen of many of the like nature that are in the book. "Christmas holidays were attended with snow, followed by a sharp frost. A thaw came on in the afternoon of the 27th, but, in the night, the ground was again caught by a severe frost, which glazed the streets. I did not awake the next morning till daylight *seemed* to appear. I rose in tears, for fear of punishment, and went to my father's bedside to ask what was

o'clock. He believed, six. I darted out in agonies; and, from the bottom of Full Street to the top of Silk-mill Lane, not 200 yards, I fell nine times! Observing no lights in the mill, I knew it was an early hour, and that the reflection of the snow into my window had deceived me. Returning home, it struck two. As I now went with care, I fell but twice."

Next year he saw two men hanged,—nearly lost his hand by the catching of the cogs of an engine in the factory, and was terribly thrashed by his father, who broke his walking-stick over his bones. But here our young philosopher began to show what stuff he was made of; for, as soon as the battery was over, he picked up the fragments of the stick, and began to splice them together with a bit of string, for his own use. In the course of the following year he got another brother, and lost his mother. "I returned from the mill at noon, on Friday, March 9th, when Nanny Ease, my mother's friend, accosted me with,—'Your mother is gone!' I burst into tears. 'Don't cry; you will go yourself soon.'—The remark did not add to my comfort. * * * A few days after her death, my father gave up house-keeping, sold the things, and *spent the money*,—took lodgings for himself and children with a widow, who had four of her own. My mother gone,—my father at the alehouse,—and I among strangers,—my life was forlorn! I was almost without a home, nearly without clothes, and experienced a scanty cupboard. At one time I fasted from breakfast one day till noon the next, and even then dined upon flour and water boiled into a hasty-pudding. I was also afflicted with the chin-cough and with boils. * * * On my birthday, at night, my father treated us with a quart of twopenny beer; and observed, that the life of man was divided into seven stages, of ten years each, and that I had now completed the first."

[To be continued.]

Claude Lorraine.—Some curious instances might be afforded of the continuance and perpetuation by authors of a mistake once made. The following is singular:—Sandraat, who was a contemporary of Claude, wrote his life in Latin, and from this source all subsequent writers have supplied themselves. Sandraat says that Claude, being found dull at learning, was taken from school, and put under a painter of eatables—"à parentibus suis in disciplinam tradebatur, *pictori* cuidam artocreatum." This latter part has always been translated, "put him apprentice to a *pastry cook*." Every modern life of Claude has it so, and many of the great masters in the art and mystery of pastry have no doubt glorified greatly in having had so illustrious a brother. How "*cuidam pictori artocreatum*" came to be translated into a pastry-cook, it is useless now to consider. The fact is, both in Germany and Italy, the painting of signs for shops and other places where eatables are sold was an extensive trade, and is even now practised by many, as the signs on the shutters and doors throughout Germany and in parts of Italy prove; the representation of of rolls, pies, cakes, sausages, &c., being often "done to the life."—'*Book of Table Talk*,' vol. ii.

SIDMOUTH.

THE situation of this agreeable little watering-place, on the south coast of Devonshire, is as pleasing as can be imagined. It lies in the bottom of a valley, opening to the sea, between two lofty hills, covered with verdure to their summits, where an extensive and varied prospect of a beautiful part of the county is afforded on one side, and on the other a view of the open sea, bounded by a line of coast which stretches from Portland Isle on the east to Torbay on the west. The summit of Peak Hill, on the west, is a lofty ridge, extending from north to south; that of Salcombe Hill, on the east, is much broader, and affords room for a race-course: both are highest towards the sea, where they terminate abruptly, forming a precipice of great depth, on the very edge of

which the labourer may be seen guiding the plough several hundred feet perpendicular above the sea.

The town is irregularly built, but its appearance is generally neat, and in some parts handsome; and it is well supplied with excellent inns and boarding-houses. The neighbourhood of the town is covered with detached residences, in the ornamented cottage style. They are, almost without exception, surrounded with gardens;—they command pleasing prospects, and are accessible by shady lanes, which wind up the hills, and intersect each other in all directions. Peak Hill is covered in this manner at least half-way up its side, and it receives some beautiful addition every season.

The walk on the beach is about half a mile in length, and is lined with the libraries, bazaars, baths, music-rooms, and other constant accompaniments of a fashionable watering-place. There are many good shops in the interior of the town, and weekly markets are held on Tuesdays and Saturdays. The population in 1831 was 2747, showing an increase of 1000 on the number of the preceding census, and it is now estimated to be between 3000 and 4000.

The manor of Sidmouth was given by William the Conqueror to the abbey of St. Michel, in Normandy, and was afterwards taken possession of by the crown, during the wars with France, as the property of an alien foundation. It was afterwards granted to the monastery of Sion, with which it remained until the dissolution.

Old topographical writers speak of Sidmouth as a considerable fishing-town, and as carrying on some trade with Newfoundland; but its harbour is now totally choked up with rocks, which, at low water, are seen covered with sea-weed, stretching to a considerable distance from the beach.

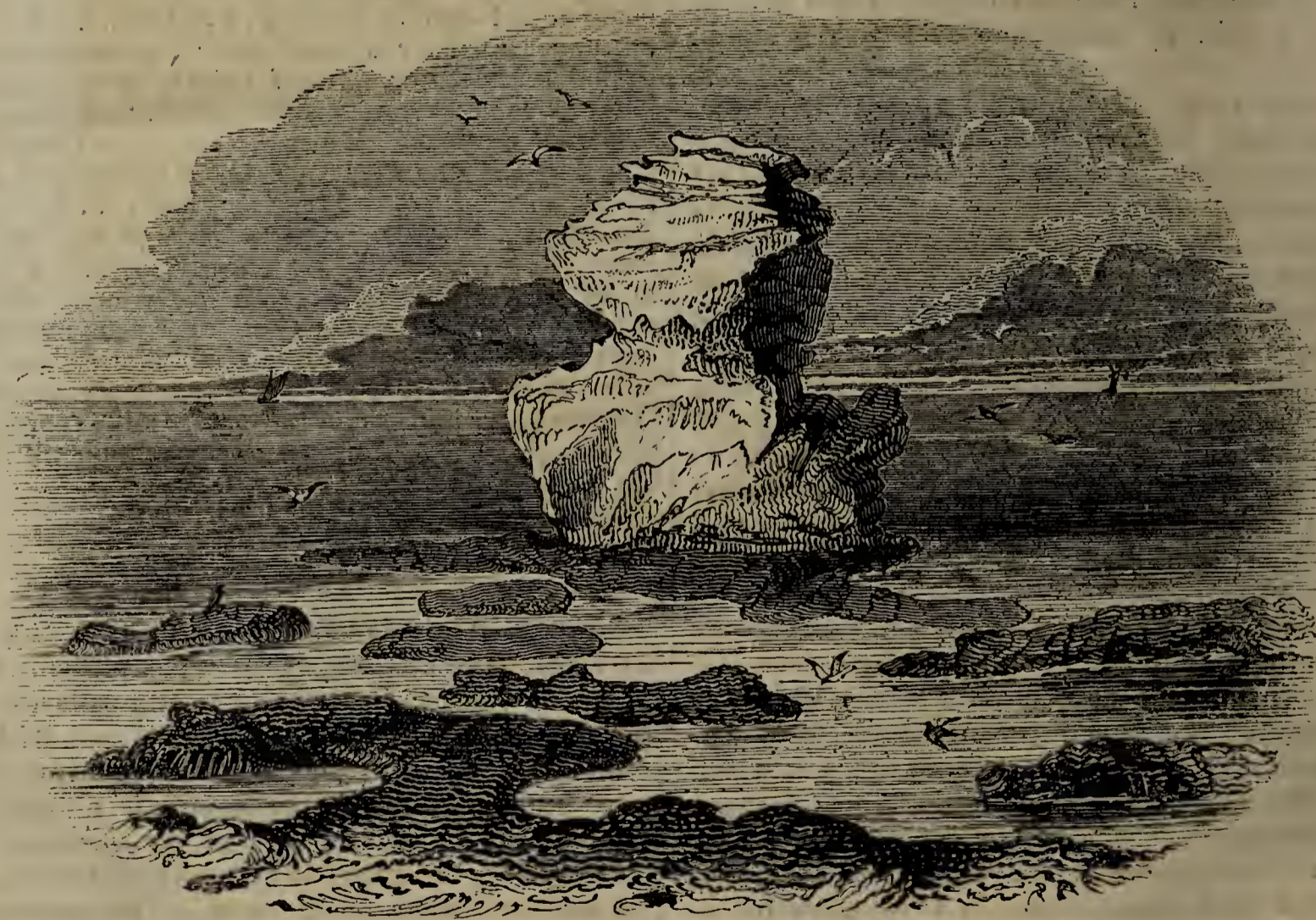
Previous to the great storm of November, 1824, which extended over all the north of Europe, and was felt most sensibly upon the southern coast of England, the little rock of which we give an engraving formed a pretty feature in the sea-view, and was the only object which broke the uniformity of the prospect. It was a mass of indurated clay,—the last wreck of the land, which, at no very remote period, undoubtedly extended

itself in this direction, and which has been gradually washed into the sea. The work of destruction is yet going on, and large pieces of the cliffs not unfrequently fall down, particularly under Salcombe Hill, in rainy weather. The conspicuous situation of Chit Rock made it an object of interest, and gave rise to an annual festival among the fishermen, who every year formed a procession to its base, and crowned the oldest member of their body King of Chit Rock; some of them climbed to the summit, where they fixed a flag, and a day of feasting usually concluded with a parting bowl upon the rock, which was partaken of by as many as could get to the top, and find a footing upon its very narrow dimensions.

The great storm which destroyed so much shipping on the coast, and considerably damaged the Breakwater at Plymouth, was felt very severely at Sidmouth. It took place about one o'clock in a dark November morning; the beautiful beach was destroyed, and washed many yards up into the town; the library and places of amusement fronting the sea were much damaged, the lower part of the houses filled with water, and the inmates, in a number of instances, were taken from their bedroom-windows in boats. When the morning dawned, the streets of the town were found filled with sand, stones, and rubbish,—the shore was covered with wrecks, and Chit Rock, which had braved so many storms, was gone.

Subsequent visitors regret the loss of this little rock: it was not much in itself, but it was the only object in view on that side, and was prized accordingly. It was also a goal to be attained by those who were actively disposed; and most persons who visited Sidmouth, once at least during their stay, made an attempt to reach it: this was a matter of some little difficulty; it was only at low water that it could be done, and the rocks were so slippery from the slimy sea-weed by which they were always covered, that many a slip into the water has been the consequence of an insecure step, or a leap from one stone to the other.

The sketch from which our engraving is taken had been made but a short time before the great storm, and not long after the celebration of the festival.



[View of Chit Rock, Sidmouth.]

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TEUTONIC AND SCANDINAVIAN ROMANCES—THE NIBELUNGEN LAY.

[Concluded from No. 295.]



[From the Frescoes of the Nibelungen.]

WHEN Chrimhild had dwelt thirteen years with King Etzel, and borne him a son, she bethought herself of inviting King Gunter with his brothers, and Hagen, his uncle, and all the choice Burgundian warriors, to a "high feast" in Hungary. The message, which was carried to Worms by the minstrels Werbel and Swemel, was at first received with diffidence, and Hagen strongly opposed accepting the invitation. Uta, the queen mother, was also in opposition, because she had dreamed a dream, in which she saw all the birds of Burgundy drop down dead; while Rumold, the master of the royal kitchen, attempted to show that it would be ridiculous to go all the way to Hungary for a feast, seeing that they had plenty of meat, drink, and

clothes at home. However, after seven days of consultation, Chrimhild's invitation was accepted, and Gunter, with his brothers, Hagen and the rest (a retinue of 1000 knights and 9000 squires), set out for Hungary, leaving Brunhild and the queen mother at Worms, under the care of Rumold, the head cook. Among Gunter's choicest knights was one Folker, of Alsace, commonly called the Fiddler, on account of the excellence of his playing and singing: this personage plays a very conspicuous part, both as a hero and buffoon, in the sequel of this long story.

After meeting with a mermaid, who predicted to Hagen that he was running into danger by going "into King Etzel's land," and having encountered one

or two other adventures, Gunter arrived at Etzelenburg, where the king of the Huns kept court. Chrimhild was affable to Ghiseler, Gunter's and her own youngest brother, but stern to all the rest. When Haghen saw her face, he tied his helmet faster on his head. "What presents have ye brought me from the Rhine?" cried the Queen of the Huns. Haghen replied, scornfully, that he was sorry he had not brought her a gift from his own treasury. "Why brought ye not the Nibelung treasure?" cried the queen, in still more wrath. Haghen answered that it was sufficient for a knight to carry his armour and his sword. The queen then bade them give up their arms before they entered the hall, and when Haghen and Gunter sternly refused to do so, she felt convinced that they had been forewarned of the compliment she intended paying them.

Haghen then took Folker the Fiddler, aside, and they went together across the court, and sat them down on a bench before the hall of Chrimhild. When the queen beheld them there, she wept bitterly, and complained to her knights of all the injuries Haghen had done her. Having inflamed them against the two Burgundians, she descended to the court with 100 knights to kill them. At the approach of the queen, Folker the Fiddler would have risen out of respect, but Haghen told him to sit still, lest their enemies should take it for a sign of fear.

"'Twas then the hero Haghen across his lap he laid,
Glittering to the sun, a broad and weighty blade."

This was Balmung, the sword of Siegfried, the sight of which much affected the queen.

"It minded her of all her woes: Chrimhild to weep began.
Well I ween Sir Haghen in her scorn the sword had drawn.

* * * * *
Folker, knight of courage, bold by his side sate he;
A sharp and mighty fiddle-stick held the hero free."

What with the sight of "Balmung," and the "mighty fiddle-stick," and a tale told by one of the Huns of the prowess of Haghen, whom he had seen in his youth in twenty-two battles, the hundred knights became afraid of attacking the two champions, and departed in peace. Then Haghen and Folker rejoined King Gunter, and they all proceeded to the hall of King Etzel, who received them with a show of courtesy.

At night, when Gunter and his knights retired to the large hall, where all their beds were prepared, Haghen undertook the guard, and for the sake of a little music associated Folker with him, who soon fiddled all the champions to sleep. Of a sudden he ceased his lay, for he discovered helmets glittering in the light of the moon. These were knights sent by Chrimhild to murder Haghen in his sleep; but seeing the hall-door guarded, they hastily retired, much taunted for their cowardice by Folker the Fiddler.

The following morning King Gunter was to go to hear mass with King Etzel, and his knights were attiring themselves in "silken shirts" and "spacious mantles," when Haghen, reminding them of "Lady Chrimhild's angry mood," made them put on their armour. King Etzel, who, it should appear, had intended to murder his guests in the church, marvelled much when he saw them in complete armour, and they excused themselves by saying, falsely, that such was the common custom of Burgundy. After mass there was a tournament, but the Huns declined engaging with the fierce visitors. Haghen (who could never be quiet), on seeing a Hun arrayed in splendid armour, rode at him in the crowd, and pierced him through and through with his lance. Then began a general engagement, which was interrupted by Etzel, who threatened to hang any Hun who harmed his guests. After this the knights of both nations went to dinner, at which they sate in complete armour, every one mistrusting the other. Towards the end of the repast, Ortlieb, the

young son of Chrimhild and Etzel, was brought in: Haghen spoke lightly of the boy, thereby incensing the king, and increasing the wrath of the queen. Meanwhile Blodelin, the brother of King Etzel, incited by Queen Chrimhild, went with his knights into another hall, where Dankwart, the brother of Haghen, was dining with the Burgundian squires, and defied him to his teeth as one of the murderers of Siegfried. Dankwart swore he was innocent, and then, with his first blow, cut off Blodelin's head. The Burgundian squires, though mostly unarmed, drove out the Hunnish knights, but they, soon returning in greater force, slaughtered all the nine thousand squires! Dankwart fought his way through the *mêlée*, and rushing to the hall, where the kings and knights were dining, told his brother what had happened, upon which Haghen commenced a general slaughter of the Huns, by cutting off young Ortlieb's head, which fell into his mother's lap. Chrimhild now began to fear for her own life, but Dietrich of Berne, a friendly guest, who had nothing to do with the champions of Burgundy, took up her Majesty under one arm, and her husband Etzel under the other, and carried them out of the hall, away from the fearful affray, which ended in the champions remaining sole masters of the hall, after killing and throwing out of window 7000 Huns! In the conflict Folker particularly signalized himself

"King Etzel cried, 'Alas and woe! that to this feast they came,
For there a fearful champion fights, Folker is his name,
Raging like a savage boar; a fiddler mad is he;
Praised be my luck, that from the fiend safely I could flee!
Fouly his lays resound; his fiddle-stick is red,
And oh! its dreadful tones strike many a champion dead!'"

After a short truce, the fight was renewed, Chrimhild offering great riches to any one who would attack Haghen. Iring, Margrave of Denmark, at length undertook the task, and wounded Haghen on the skull, but he was killed by that champion, and so were Irnfried and Hawart, and all their knights, who tried to avenge Iring's death. Chrimhild then brought up 20,000 Huns to attack the heroes, who fought furiously, but not without heavy losses, till nightfall, when the assailants, not knowing what better to do, set fire to the hall. The heroes, now reduced to 600, were at the last extremity. They had nothing wherewith to quench the raging thirst caused by the fire and smoke, till, by the advice of Haghen, they drank the blood of their foes. Fortunately, the hall-roof was arched, "which," says the song, "prevented a general conflagration;" and Haghen, Folker, and their fellows, were only half-roasted by the following morning, when they were attacked by a fresh host of Huns, whom they slew to a man.

Rudiger, who had gone to Worms to obtain the unlucky hand of Chrimhild, was one of the bravest warriors at court; but as he had entertained the Burgundians on their journey, and *shown them hospitality in his own house*, he could hardly be prevailed upon to attack them: and even when he yielded to the King and Queen on their knees, and prepared himself and his knights, with heavy hearts, for the attack, he advised the Burgundians, that they might get ready to withstand him, and told them he was only persuaded to it by the entreaties of Chrimhild. The only glimpses of the generous spirit of chivalry that are caught in this foul and murderous epic are in the character of Rudiger. When told by Haghen that the shield he had given him at his castle was hewn to pieces, Rudiger insisted on his accepting the one he then wore, that so they might be on a more equal footing in the fight. Even Haghen was touched by his generosity, and, with Folker, swore he would not fall upon Rudiger, who, however, was slain by Ghernot, one of King Gunter's brothers, after he (Ghernot) had received a mortal wound on

the head from the sword of Rudiger. All Rudiger's knights were then added to the heap of dead, but not before the Burgundian band was almost exterminated. Dietrich of Berne, who, very prudently, had abstained from an active interference, then sent his follower Hildebrand, a wise old warrior, to demand the dead body of Rudiger from the Burgundians. Wolfhart, Sighestab, and Helfrich, three nephews of Dietrich of Berne, would follow Hildebrand, in spite of the good advice of their uncle. And now the catastrophe approaches, which, in some respects, resembles that of the immortal drama of 'Tom Thumb,' when all the heroes lie dead on the stage together.

When they entered the hall, and saw the hospitable and noble-hearted Rudiger lying dead, the lamentations of Dietrich of Berne's messengers were excessive, and Wolfhart could not refrain from insulting the heroes of Burgundy, who refused to deliver the body. Folker answering in the same style, Wolfhart broke loose from Hildebrand, who would have kept the peace, and struck the fiddler a mighty blow,—but the fiddler felled him dead in return. Nothing could now restrain the heroes from the fight. Folker slew Sighestab, and the wise old Hildebrand slew Folker, whose "red fiddlestick" thus at last dropped from his hand. Helfrich, Dietrich's last nephew, and Ghiseler, Gunter's last brother, exchanged death-wounds with one another;—so that, at length, none remained on either side, except Haghen, King Gunter, and Hildebrand. The wise Hildebrand endeavoured to carry off the body of the brave Wolfhart, but he was put to flight by Haghen, and flying to Dietrich, told him all that had happened. Then the mighty Dietrich of Berne armed himself, and going to the hall where Haghen and Gunter stood among the dead, bade them surrender: they refused. Upon this, Dietrich attacked Haghen, and, after a fierce combat, bound him, and carried him to Chrimhild, imploring that queen not to take his life. Dietrich returned to the hall, and, after another hard fight, also brought King Gunter bound. The Knight of Berne then departed, loudly lamenting.

Chrimhild offered Haghen his life if he would tell where he had concealed the Nibelungen treasure; but Haghen, well knowing her malice, refused the condition.

"Then I'll bring it to an end," spake the noble Siegfried's wife. Grimly she bade her meiny* take King Gunter's life. Off they struck his head, and she grasped it by the hair!"

Having thus finished her brother, she turned to Haghen:—

"When that sorrowing hero his master's head did see,
Thus to Lady Chrimhild spake he wrathfully:—
'Thou hast brought it to an end, and quenched thy bloody thirst;
All thy savage murders I prophesied at first.
Where was sunk the Nibelung treasure, knows none but God and I:
Never, thou fiend-like woman, that treasure shalt thou nigh!"

Chrimhild replied:—

"Fouly hast thou spoken;" thus she spake with eager word;
'But still I bear in my right hand, Balmung, that noble sword,
That bore my Siegfried dear, when, by your treacherous deed,
Basely he was murdered; nor shall you better speed.'

From out the sheath she drew that blade so good and true;—
She meant the noble champion with his life the deed should rue.
Up she heaved the falchion, and off she struck his head.
Loudly mourned King Etzel, when he saw the hero dead.

He wept and mourned aloud: 'Oh woe! by woman's hand
Lies low the boldest champion,—the noblest in the land,
Who ever shield and trusty sword to the bloody combat bore!
Though he was my fiercest foe, I shall mourn him evermore.'

Up and spake old Hildebrand,—'Thus she shall not speed;
She has dared to strike the champion dead, and it's I will quit
the deed.

Full oft he wrought me wrong,—oft I felt his direful wrath;
But bloody vengeance will I have for the noble hero's death.'

* Retinue, or train of attendants.

Wrathfully Sir Hildebrand to Queen Chrimhild he hied:
Grimly he struck his falchion all through the lady's side:
In sooth she stood aghast when she viewed the hero's blade:
What might her cries avail her? On the ground the Queen
fell dead.

There bled full many a champion, slaughtered on that day;
Among them Lady Chrimhild, cut in pieces, lay.
Dietrich and King Etzel began to weep and mourn,
For their kemps* and for their kindred, who there their lives
had lorn.

Men of strength and honour weltering lay that morrow;
All the knights and vassals had mickle pain and sorrow.
King Etzel's merry feast was done, but with mourning did it end:
Thus evermore does love its pain and sorrow send!

What sithence there befel, I cannot sing or say—
Heathens bold and Christians full sorely wept that day,
With many a swain and lady, and many maidens young,
—Here ends the tale adventurous, hight the Nibelung Song."

This poem has furnished numerous subjects for the German painters. We have given specimens of some of the most celebrated. The Frescoes in page 409 are after a design of Cornelius, one of the most eminent modern artists of Munich. The compartments numbered from the right hand to the left, represent,—
1. Siegfried's entrance with the conquered kings Luidgart and Luidgern, the kings of Saxony and Denmark. 2. The marriage of Siegfried and Chrimhild. 3. Siegfried overcoming Brunhilda, and taking possession of her ring and girdle. 4. Siegfried's departure for the chase. 5. The Nibelungen fight in the palace of the king of the Huns. 6. Occupying the centre and bottom of the lower division. Etzel and Dietrich weeping over the slain. Those at pages 433 and 449 are copied from a series of magnificent Frescoes in the new palace at Munich, which have been painted for the King of Bavaria by Schnor, a very celebrated artist. The first represents Siegfried taking leave of Chrimhild on departing for the chase, in which he was assassinated. The second is Chrimhild discovering the dead body of her husband, which had been laid before her chamber door by Haghen, as described at page 434, col. 1.

British Manufactures among the Indians in the Interior of South America.—A recently published volume, 'A Narrative of an Expedition across the Andes, and down the Amazon, from Lima to Para, &c.,' by Lieutenant William Smyth, contains many interesting details respecting countries beyond the line of the Spanish and Portuguese settlements, which are still occupied by Indians of the Peruvian and other races, and rarely or never visited by the European. The following extract is pleasing in a double sense. It shows an advancement on the part of the natives, and proves the vast and still increasing extension of the market for the works of our industry and ingenuity:—"Cotton, gums, resins, and white wax, are the principal products of their woods; the wax is formed into round cakes, weighing about a pound each; and these are the currency of the place, each cake being considered as equivalent to a dollar. Our trinkets had a high value set upon them, and we were able to purchase a large quantity of provisions with a few of them. Cotton handkerchiefs, knives, and scissors, were also in request. British manufactures are to be found exposed to sale in no inconsiderable quantities. Printed cottons, green baize, ribands, coarse cutlery, and glass beads, all English, were sold in several houses; and, indeed, throughout the whole of our journey, we never entered a place, that was more than a small village, in which we did not meet with some of the manufactures of our own country." The particular place Lieutenant Smyth alludes to in the first instance is Tarapota, an Indian town near the junction of the rivers Huallaga and Moyo; the whole of his journey was through the heart of the South American continent, from the Pacific to the Atlantic Ocean, a distance, in a straight line, of more than 800 leagues!

* Champions:

A SKETCH OF A CASTILIAN VILLAGE.

[From a Correspondent.]



[Village of Villa Vellid, in Old Castile.]

THE accompanying cut represents the village of Villa Vellid, in Old Castile, situate about half-way between Medina de Rio Seco and the city of Toro. It may be taken as a fair specimen of the hundreds of similar little villages in this province, and in the southern parts of Leon; all of which bear the same characteristic features, being constructed of similar materials and on the same plan. They contain usually from 100 to 300, and even 400 houses; which, according to the Spanish rate of calculation, will give about five times as many inhabitants.

There are no instances in this part of Spain of detached farm-houses in the country, as in the other provinces and in England; all are collected together in groups or villages, at distances of about two to three miles from each other, which gives the country generally a very monotonous appearance, being quite unbroken by any of those picturesque objects so common in most other countries, in the shape of trees, houses, and agricultural buildings of various descriptions. The prospect shown in the wood-cut embraces an extent of some forty or fifty miles; yet, on that immense plain, only seven or eight trees of any kind can be discovered, if we except a small tract of land covered by the short and shrub-like evergreen oak, or "Encina," which supplies the inhabitants with charcoal. This want of foliage, together with the unbroken nature of the ground, and the mean appearance of the villages, which seem (excepting their churches) mere collections of tiled mud-huts, render Castile the very reverse of picturesque, and (especially in winter and autumn, when the green corn-leaf is unseen) give it the appearance of a desert rather than of a cultivated province.

The houses are very small, and seldom higher than one story. The interior is usually whitewashed, the floor paved with bricks placed sideways, and the walls ornamented with some gaudily-coloured French en-

gravings of saints and martyrs; with the addition now and then of an "indulgence," purchased from the nearest monastery, or an ornamented metal crucifix. The one solitary window is very small, and rarely glazed; having a shutter, or a piece of oiled paper, sometimes fixed to it, to keep out the cold winds of winter. The walls outside retain the natural colour of the clayey soil of which they are formed, excepting a space of a few feet on each side of the door, which is ornamented or disfigured by rude representations of flowers, or men painted in red on a whitewashed ground—a remnant of an ancient Moorish custom. The walls are formed of huge bricks, or masses of unbaked clay, of near three feet in length by about twelve to eighteen inches in breadth, and of equal depth. They are usually supported within a few feet from the ground by two or three layers of large square stones. At the door, which is usually divided into two parts, like those of some of the old-fashioned shops in English towns, and thickly studded with large round-headed nails, are two or three large blocks of stone, on which the good women sit down and spin during the greater part of the fine days. The narrow streets which divide the rows of houses resemble the dry beds of mountain torrents, and in the rainy season the simile might be carried much farther. The churches form a surprising contrast to their lowly neighbours, being strongly-built edifices, with towers of proportionate size; having always one or more bells slung across the windows or apertures near the top, which are pealed by being spun around their pivots. The interiors are very neatly finished—often highly ornamented; the altars particularly shine forth in no little splendour, and the favourite Virgin, or "Señora," is dressed up at an expense which would probably clothe all the inhabitants of the village.

Villa Vellid contains between 400 and 500 inhabit-

ants, and about 90 houses; yet this small and poor population contrives to support two large churches and their three attendant clergymen, or "curas;" and so far are they from thinking this expense and establishment exorbitant, that I have little doubt one-half of them would think their very salvation compromised by any attempt to remove either one of their churches or its priest. The "curas" are generally frank and urbane in their manners; mixing freely in the sports of their parishioners, and joining familiarly in their conversation. Strange as it may sound to an English ear, I have seen "curas" regularly join the villagers in a game or two at "calvo" (a sort of duckstone) for an hour or so after service on Sunday, and in the evening adjourn to the house of one of the favoured, with six or eight companions, to pass the rest of the Sabbath at cards!

There are no gay shops exhibiting their wares in the windows, or outside the doors, not even the "omnibus shop of the huckster," so common in England; there are only two houses of sale, the tavern and the tobacco shop, this last being a government monopoly. The surgeon officiates also as barber: he is paid at the rate of about a bushel of wheat per annum per family in his first capacity (on the condition that he pay a weekly visit, at least, to each), and about half as much in the latter, if the folks are shaved at his own house; should any luxurious inhabitant wish to be shaved at home, he must double his quota of corn. The apothecary—a distinct functionary—is remunerated in the same manner, but less munificently, as holding an inferior occupation to that of the barber-surgeon. A tailor makes a progress regularly once or twice a year, like a wandering fiddler, through a certain district, and is paid partly by his maintenance, and partly by means of coin: this article is, however, somewhat scarce, and not often used amongst these primitive people, their transactions being usually conducted on the principle of barter. Many of the families are sufficiently affluent to consume chocolate and sugar, which are procured at a *depôt*, perhaps eight or ten miles distant. In summer one butcher supplies meat for the "puchero" of a dozen neighbouring villages; in winter they seldom consume other animal food than the dried flesh of kids, called "cecina," which is excellent, and might be eaten as a dainty where less common.

Corn and wine are so abundant as to exceed the wants of the inhabitants, but the markets for their sale are so distant, and so expensive of access, that it scarcely pays to transport to them the superfluous produce; the natural consequence of which is, that the people are in a great measure deprived of other articles of comfort which they might receive in exchange for their corn, and exhibit a strange *mélange* of poverty and affluence: for instance, groups of men are often met with, basking in the sunshine during half the day in the villages, strong and well fed, and perhaps even then quaffing at intervals their good "vino tinto;" and at the same time clothed, or rather half clothed, by a cloak transmitted to them front their grandfather at least, and which is so patched up, ragged, and mended again, that no one piece can be found in it larger than one's hand.

The "curas" of the villages possess great influence over their parishioners, and are generally much respected; often, as I can vouch from experience, men of good moral principle, and conducting themselves in a most praiseworthy manner towards the people of their cure. There are some, no doubt, who make an evil use of their unlimited power over the minds of the people, and extort from them, under pretence of religious motives, their little wealth, and otherwise abuse the confidence of the ignorant and unsuspecting; but this, I sincerely believe, is not carried commonly to any extent, as too often represented. The monks and friars,

who are continually visiting these little communities, are by no means so much liked as the secular clergy, and bear a reputation much more unfavourable, and more deservedly so.

The castle represented in the cut is an old Moorish fortress, perfectly simple and extremely massive in its construction, having only one entrance—a low Moorish archway—and a few narrow slits on two sides for the defenders. It is built of a hard kind of stone, cemented and knit together in a very firm and enduring manner. It is one of the hundreds that are scattered about this part of Spain; every fifth or sixth village being thus now adorned, as it was once protected.

The cross in the foreground is a speaking witness of the state, or rather the non-existence, of efficient police regulations in this misgoverned country. Such are often met with on the sides of the roads in desert or sequestered places—they are the only memorials of men found there, at some time or other, dying or slain by the hand of the assassin; the murderer, perhaps, before the deed be discovered, already in some distant province, defies the feeble inquiry and pursuit which is sometimes not even attempted. The charitable inhabitants of the nearest village erect this simple monument over his unconsecrated grave; and what could be devised more beautiful and pathetic than its simple epitaph, "Adios, pobre*!"

HUTTON'S LIFE, WRITTEN BY HIMSELF.

[Continued from No. 296.]

IN 1735 William had a short holiday, not through the kindness, but in despite of his hard taskmasters. "This summer," he says, with his usual *naïveté*, "was so dry that the water would scarcely turn the wheels; which, giving us children leisure, was very agreeable." His account of the next year opens less pleasantly.

"I was now turned twelve. Life began to open. My situation at the mill was very unfavourable. Richard Porter, my master, had made a wound in my back with his cane. It grew worse. In a succeeding punishment the point of his cane struck the wound, which brought it into such a state that a mortification was apprehended. My father was advised to bathe me in Keddleston water. A cure was effected, and I yet carry the scar." About this time he picked up a little instruction from an agreeable old woman of the name of Gell, who had been a schoolmistress. He also made a journey to Nottingham, where he saw his aunt (the fine lady already described), whom he thought handsome, proud, and sensible. She, however, taught him some manners. "Billy," said she, "it is not good manners to sit in the house with your hat on." I felt the reproof, and never forgot it.

When his seven years' servitude at the silk-mill had expired, it was necessary to think of some other trade. William wished to be a gardener, but his father opposed this, and to save himself expense and trouble, turned him over, for another term of seven years, to his brother, a stocking-maker at Nottingham. Accordingly, at Christmas, 1737, he left the mill, "a place most curious and pleasing to the eye," but which, he says, had given him a seven years' heart-ache. It does not appear that his condition was much improved at Nottingham, and, at best, the wretched trade of a "stockinger" offered small hopes for the future.

"I found a friendly uncle, a mean sneaking aunt; he seriously religious, she as serious an hypocrite: two apprentices, one a rogue, the other a greater. I had just finished one seven years' servitude and was entering upon another. In the former I was welcome to the food I ate, provided I could get it; but now that it was

* "Farewell, poor fellow!"—This may be also translated "Alas, poor fellow!"

more plentiful I was to be grudged every meal I tasted. My aunt kept a constant eye upon the food and the feeder. This curb galled my mouth to that degree, that to this day I do not eat at another's table without fear. The impressions received in early life are astonishing. * * * I was too young to have any concern in the terms of servitude, and my father too poor to lend assistance. A burden was therefore laid upon me which I afterwards found intolerable; my over-work, without knowing whether I should get any, must find me clothes. My task was to earn for my uncle 5s. 10d. a week. The first week I should reach this sum, I was to be gratified with sixpence; but ever after, should I fall short or go beyond it, the loss or profit was to be my own. I found it the general practice of apprentices to be under the mark."

But poor Hutton could not afford to follow the general practice; he worked late and early to get himself clothes, yet so slow was his progress, that two years after, when there was one of the severest winters ever known, he had to wear "a thin waistcoat without a lining, and no coat." The bad winter was followed by an untoward summer; provisions rose in price, and his aunt stinted him more than ever. At last, however, in the year 1741, what with over-work and a little credit, he made shift to raise a "genteel suit of clothes," suited to the sphere in which he moved. "Youth," he says, "is the time to dress; the time in which it is not only excusable, but laudable. * * * The girls eyed me with some attention; nay, I eyed myself as much as any of them." But before securing the aids of a tailor, poor Hutton had fallen in love, and in a very Platonic manner. "I was struck," he confesses, "with a girl, watched her wherever I could, and peeped through the window-shutter at night. She lay near my heart eleven years; but I never spoke to her in my whole life, nor was she ever apprized of my passion." Happy in the possession of a coat and a new wig, William little foresaw an approaching storm, that was to drive him back again into the gulf of raggedness. His uncle, the master stockinger, though a good man in the main, was subject to violent fits of passion, in one of which he most cruelly beat his nephew for a very venial offence. "He brought a birch-broom handle, of white hazel, and, holding it by the small end, repeated his blows till I thought he would have broken me to pieces. The windows were open, the evening calm, and everything mild but my uncle and I. The sound of the roar and the stick penetrated the air to a great distance. The neighbours turned out to inquire the cause; when, after some investigation, it was said to be, 'Only Hutton thrashing one of his lads.'" His mind was even more hurt than his body by this harsh usage, and his mortification was completed the following morning by one of his female acquaintances saying to him with a sneer, "You were licked last night." He could bear it no longer; he determined to run away. The very same evening, being Sunday the 12th of July, 1741 (he marks the dates with the solemnity the case requires), he packed up his small stock of moveables, and took the road with two shillings in his pocket. His description of his personal appearance, and the inventory of his goods and chattels, are irresistibly droll.

"Figure to yourself a lad of seventeen, not elegantly dressed, nearly five feet high, rather Dutch built, with a long narrow bag of brown leather, that would hold about a bushel, in which was neatly packed up a new suit of clothes; also a white linen bag, which would hold about half as much, containing a sixpenny loaf of coarse blencorn bread, a bit of butter, wrapped in the leaves of an old copy-book; a new bible, value 3s.; one shirt, a pair of stockings; a sun-dial, my best wig, carefully folded and laid at top, that, by lying in the hollow of the bag, it might not be crushed. The ends

of these two bags being tied together, I flung them over my left shoulder, rather in the style of a cock-fighter. My best hat, not being calculated for a bag, I hung to the button of my coat. I had only 2s. in my pocket, a spacious world before me, and no plan of operation. * * * I carried neither a light heart nor a light load; nay, there was nothing light about me but the sun in the heavens and the money in my pocket."

He strode on to Derby, and passed that night in an adjoining field called Abbey-barns, the scene of his amusements in childhood. The field was full of cattle. The full breath of the cows half asleep, the jingling of the chains at the horses' feet, and a troubled mind, prevented his enjoying much rest. The next morning, starved, sore, and stiff, he walked on to Burton, at the distance of twenty-eight miles from Derby, spending nothing on the way. "I was an economist," he says, "from my cradle, and the character never forsook me. To this I, in some measure, owe my present affluent situation." But here, though worn down with sorrow and fatigue, he showed that laudable curiosity which was also a characteristic that never forsook him. "I ever had an inclination," he says, "to examine fresh places. Leaving my bags at a public-house, I took a view of the town, and breaking into my first shilling, I spent one penny as a recompense for the care of them." That evening he found himself within the precincts of Lichfield, and espying a detached barn he intended to make it his dressing-room and chamber for the night; but the door being locked, he dressed himself in his best, in the fields, hid his bags under a hedge, and took a view of the city—*though very sore-footed*. He returned to the unlucky spot at nine o'clock, changed his dress, bagged up his best in decent order, and began to think where he should sleep.

"About a stone's cast from the place stood another barn, which perhaps might furnish me with a lodging. I thought it needless to take the bags while I examined the place, as my stay would be very short. The second barn yielding no relief, I returned in about ten minutes, but what was my horror when I perceived the bags were gone! Terror seized me. I roared after the rascal, but might as well have been silent, for thieves seldom come at a call. Running, raving, and lamenting about the fields and roads employed some time. I was too much immersed in distress to find relief in tears. I described the bags, and told the affair to all I met. I found pity, or seeming pity, from all; but redress from none. I saw my hearers dwindle away with the summer twilight, and by eleven o'clock found myself in the open street, left to tell my mournful tale to the silent night. It is not easy to place a human being in a more distressed situation. My finances were nothing; a stranger to the world, and the world to me; no employ, nor likely to procure any; no food to eat or place to rest: all the little property I had upon earth taken from me; nay, even *hope*, that last and constant friend of the unfortunate, forsook me. An eye may roll over these lines when the hand that writes them shall be still. May that eye move without a tear! I sought repose in the street, upon a butcher's block."

With a lighter load, but a heavier heart, he walked on the next morning to Walsall, where, on inquiring for work, a man who was selling stockings in the market, told him there were no frames there, but many in Birmingham. To Birmingham, therefore, he went. Though very inferior in those respects to what it now is, Hutton was forcibly struck with the neat solid buildings of this town, and the busy bustling air of its inhabitants. "I was surprised at the place, but more at the people. They possessed a vivacity I had never before seen. I had been among dreamers, but now I saw men awake. Their very step along the street showed alacrity. Every man seemed to know what he

was about. 'The town was large, and full of inhabitants, and these inhabitants full of industry. The faces of other men seemed tinctured with an idle gloom; but here with a pleasing alertness. * * * It did not occur to my thoughts that nine years after I should become a resident here, and thirty-nine years after should write its history!'

All his applications for work were, however, ineffectual; the invariable answer of the Birmingham stocking-makers being—"Go about your business—you are a runaway 'prentice." Among those who thus repulsed him was Francis Grace, who, fourteen years after, gave him his niece in marriage, and sixteen years after left him his premises and fortune. Night approached—his first night in what was to him a vast and strange collection of houses, and he knew not where to lay his head. He says, "I sat down to rest upon the north side of the Old Cross, near Philip Street; the poorest of all the poor belonging to that great parish, of which, twenty-seven years after, I should be overseer. I sat under that roof a silent, oppressed object, where, thirty-one years after, I should sit to determine differences between man and man."

Two good-natured working men taking pity of his youth and distress, treated him with some ale, and procured him a night's lodging for three halfpence. The next day, determined to forget his misfortunes, he employed himself in seeing all he could at Birmingham—which he calls "that happy abode of the smiling arts." On Thursday, the 16th of July, he walked to Coventry; but though then in the heart of "the stocking country," he could get no employment. "I slept," says he, "at the STAR INN, not as a chamber guest, but a hay-loft one." The next day he was equally unsuccessful at Nuneaton and Hinckley, but at the latter place a Derbyman, and an acquaintance of his family, very properly advised him to return home. On Friday at noon he trudged into Ashby-de-la-Zouch. "It was market day. I had 8d. remaining of my 2s. My reader will ask, 'How I lived?' Moralists say, 'Keep desire low, and nature is satisfied with little.' A turnip-field had supplied the place of a cook's shop; a spring that of a public-house; and, while at Birmingham, I knew by repeated experience, that cherries were a half-penny a pound."

At nine o'clock on Saturday evening he reached Derby, where his father received him in a disconsolate manner. It was, however, agreed that his uncle should be sent for; and upon the stockinger's assurance that he would never beat him again, poor Bill returned once more to his frame at Nottingham. "This unhappy ramble," he says, "damped my rising spirit. I could not forbear viewing myself in the light of a fugitive. It sunk me in the eye of my acquaintance, and I did not recover my former balance for two years. It also ruined me in point of dress, for I was not able to re-assume my former appearance for five years."

In 1743 William was despatched, with his stingy aunt, on a hired horse, to engage a new apprentice at Mackworth. His uncle put him in the saddle, and his wife behind him on a pillion. What follows is worthy of the 'Vicar of Wakefield!' "Whether this was a prudent step is doubtful. I had never ridden a mile, therefore could guide a horse about as well as a ship; neither did uncle know much more of the matter. Our family are not naturally equestrians. He advised me to keep a tight rein. I obeyed, and the horse took it for granted he must stand still. I held my legs close for fear of falling. He danced. I was in agonies, and held by the mane. The beholders cried, 'Take your spurs out of his sides!' I did not know they were in.

"We jogged on with fear and trembling. I held the bridle with the right and the pommel of the saddle

with the left, which soon wore a hole in the hand. My hat blew off. I slipped down before to recover it, but could not mount again. I walked with the bridle in hand, and my aunt upon the pillion, to find a place to rise. The horse went too slow. To quicken his pace I gave him a jerk. He started from under his burden, and left her in the dirt.

"We were both frightened, but not hurt; and at last came home safe, wind and limb."

Not long after these equestrian adventures Hutton became enamoured of music, by hearing a man at Derby play upon the bell-harp. He asked the price of the instrument. It was half-a-crown! In six months, however, he contrived to raise that heavy sum, and walked to Derby to fetch the bell-harp, the sounds of which he thought seraphic.

"This opened a scene of pleasure which continued many years. Music was my daily study and delight. But perhaps I laboured under greater difficulties than any one ever had done before me. I could not afford an instructor. I had no books, nor could I borrow or buy; neither had I a friend to give me the least hint, or put my instrument in tune. * * * For six months did I use every effort to bring a tune out of an instrument which was so dreadfully out it had no tune in it. Assiduity never forsook me. I was encouraged by a couplet I had seen in 'Dyche's Spelling-Book':—

'Despair of nothing that you would attain,
Unwearied diligence your point will gain.'

[To be continued.]

HOW NEGROES WERE ESTIMATED BY OUR ANCESTORS.

THE 'Edinburgh Review,' in a recent article on the Slave Trade, as still carried on by foreigners, alludes to the difficulty of establishing among some of them the feelings and principles on which we ground our appeals to them for the entire abolition of this horrid traffic. This difficulty, the writer says, ought not to excite so much surprise when we reflect how long it was before the principles were acknowledged, and the feelings of humanity (where the negro was concerned) established among ourselves. He proceeds:—

"Did not the beginning of this century witness the avowed hostility of opponents?—and at the end of the last were not the abolitionists called levellers and anarchists? Let us take as an instance Boswell, a man probably not behind the current humanity of his age, who, after condemning the wild and dangerous attempt of abolishing the slave-trade, ascribing the advocacy of it to a love either of temporary popularity or of general mischief, then in his imbecile enthusiasm thanks God that there was a House of Lords wise and independent enough to stand up for a traffic which God had sanctioned and man continued*."

If we go farther back than the time of Boswell, we shall find that the negroes and coloured people of Africa generally were considered as beasts, or something worse. Being thus removed out of the sphere of human sympathy, no treatment was considered too harsh for them; and the idea that they were of the same nature as white men, and might be raised from their barbarous state, seems never to have entered the head of those who made a boast of their civilization. The Spaniards, when they began to transport them by thousands to perish in the mines of the New World, made it a serious subject of dispute, whether they were descended from Adam, or were not rather a middle species between men and apes? Even the learned seem to have taken a monstrous delight in exaggerating

* Life of Johnson, vol. vii., p. 23, edit. 1835.

the defects of their condition, in taxing them with extreme and contradictory vices, and thus more and more hardening the heart against them. One says, "All peoples have their vices mixed with virtues, but the Africans are full of all sorts of vices (*omnia mala*) without any virtue; they are inhuman, impure, drunkards, most false, most treacherous, most covetous, most fraudulent, and most addicted to all kinds of impurities and blasphemies;" another says, "They have no letters, no faith, no laws, living like beasts for ignorance, like devils for mischief, and like dogs for poverty." These pictures were never softened by any expression of pity and hope, the blacks being considered "like unto devils in all else as well as in colour," and consequently past all worldly help or heavenly redemption.

It was perhaps natural enough that ignorant sailors, brimful of prejudice, and startled and alarmed at everything differing from themselves and their own customs, should exaggerate what they saw abroad in their discourses at home; but we may be surprised at seeing voyagers and travellers of rank and superior education partaking and propagating by that more lasting instrument the pen, the same errors and the same uncharitableness.

Sir Thomas Herbert, who travelled some two centuries ago, during the reign of Charles I., was a scholar and gentleman of the highest connexions. He had long been devoted to poetry and general literature, which humanizes the mind more than anything else, and of him it may be safely said that "he was not behind the current humanity of his age." Rich and independent, he moreover crossed seas and continents for the noblest of purposes, or, in the words of Thomas Lord Fairfax, who wrote some commendatory verses, which were prefixed to his book, according to the fashion of those times,—

He travelled not with lucre sotted,
But went for knowledge—and he got it.

Yet this superior man speaks of the negroes as follows: "The inhabitants here, along the golden coast of Guinea and Benin, bounded with Tombotu, Gwalata, and Mellis, and watered by the great river Niger, but especially in the Mediterranean (inland) parts, know no God, nor are willing to be instructed by nature. *Scire nihil jucundissimum*. Howbeit the Devil (who will not want his ceremonie) has infused prodigious idolatry into their hearts, enough to relish his pallat and aggrandize their tortures, when he gets power to fry their souls, as the raging sun has scorcht their cole-black carcasses."

Sir Thomas's temper does not improve as he sails along the African coast. He thus describes the people of Congo, Angola, Loanga, Caffraria, &c., who, be it observed, differ in reality very materially from each other.

"These countries are full of black-skinned wretches, rich in earth, as abounding with the best minerals, and with elephants, but miserable in demonomy (devil-worship). * * * Let one character serve for all; for colour they resemble chimney-sweepers; unlike *them* in this, they are of no profession, except rapine and villany make one. For here *Demonis omnia plena*. * * * But in Loanga (which some put to the north of Congo, but under the equator) and the Anzigui (near which Nile draws his origin), the people (if Gonzalvo Soza says true) are little other than devils incarnate; not satisfied with nature's treasures, as gold, precious stones, flesh in variety, and the like; the destruction of men and women neighbouring them, whose dead carcasses they devour with a vulture appetite; whom if they miss, they serve their friends (so they miscall them) such scurvy sauce, butchering them, and thinking

they excuse all in a compliment that they knew no better way to express love than in making (not two souls) two bodies one, by an inseparable union: yea, some, as some report (worn by age or worm-eaten), proffering themselves to the shambles, accordingly are disjointed and set to sale upon the stalls."

It was the sweeping charge of cannibalism, once laid by ignorance on all strange, remote, and uncivilized nations, that singularly indisposed and irritated Europeans. Better inquiry has, however, established the fact that the frightful practice of eating human flesh exists in very few parts of the world. Positive proofs, indeed, have been brought only against the New Zealanders, but we must mention, in justice to Sir Thomas Herbert, or his authority, Gonzalvo Soza, that the Anzigui of Africa are still included among the very few people suspected of cannibalism.

The ingenious artist who did the "new and lively brass-cuts" (as they are called in the title-page) for Sir Thomas's book, seems to have caught the author's spirit in regard to the poor negroes; for close over the head of a figure, meant to represent a native of Angola, he has put a devil flying in the air, with horns, claws, and a long tail, with a dart at the end of it.

Continuing his course, our traveller observes, "The natives of Africa, being propagated from Cham, both in their visages and natures, seem to inherit his malediction. * * * They are very brutes." This settled the matter with Sir Thomas, to whom it seemed quite right that they should be bought and sold, and used like beasts of burden. "A dog," he says, "was of that value here, that twenty salvages have been exchanged for one of them; but of late years the exchange here made for negroes, to transport into the Cariba isles and continent of America, is become a considerable trade."

What is rather striking is that all the stories he tells are disgraceful rather to the white-skinned Europeans than to his devil-skinned Africans. "A ship of ours, of late years coasting along and landing for discovery, was so admired by the salvages, as if they had never seen ship or men afore. Two of ours adventuring the shore (some hostages being kept in the boats till they returned) were welcomed by thousands of those black-skinned Ethiopians, who were so far from doing them any injury, that they presented them with flowers, fruits, toddy, and what else they judged acceptable: after extraordinary admirations returning them safe aboard, all contented, but since have been found more savage." No wonder! for he tells us, a page or two further on, that the Portuguese were in the habit of putting them to death on "a small affront," and that, on one occasion, they killed so many negroes of Angola, that their noses, which they cut off, filled two butts!

We could multiply examples from the old travellers, but have said enough to show how the poor negroes were considered by enlightened Englishmen of the seventeenth century.

Orthography of Family Names.—Henry Fielding being in company with the Earl of Denbigh, with whose family his own was closely connected, his Lordship asked the reason why they spelt their names differently; the Earl's family doing it with the *e* first (Feilding), and Mr. Henry with the *i* first (Fielding). "I cannot tell, my Lord," answered the great novelist, "except it be that my branch of the family were the first that knew how to spell."

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STUTTGARD.

[From a Correspondent.]



[View of the City of Stuttgart.]

STUTTGARD, or Stuttgart, the capital of the kingdom of Würtemberg, is delightfully situated in the hollow formed by a semi-circular range of hills, and nearly on every side is encircled by slopes of rising ground, which are covered with gardens, orchards, and vineyards. Early in the summer few scenes can surpass in luxuriance the view which is given in the accompanying engraving, for almost every declivity which is seen from that point is appropriated to the culture of the vine; and although a vineyard on the north side of the Alps is seldom a very picturesque object, still the ideas it suggests are so elegant, and the recollections connected with it so varied, that a traveller cannot fail to be delighted at the sight. The blossoms of the vine, it is well known, have an agreeable scent, a great deal resembling that of mignonette, and even in our gardens and hot-houses its perfume is very perceptible; but in countries where the vine is cultivated upon a large scale, the air after a shower of rain in the summer is so completely saturated with this delicious fragrance, as entirely to overcome a person unused to it, with a sense of luxurious pleasure. Such was the case when the writer of this article entered Stuttgart in the summer of 1834.

Stuttgart is a clean, and upon the whole a well-built town; and a few old buildings scattered here and there about it add to the respectability of its appearance, and improve its picturesque beauty. Not being placed on

the course of any considerable stream, it has but little if any trade with the neighbouring states; but, as in other towns of Würtemberg, manufactures are carried on upon a small scale: they consist chiefly of leather, hats, cotton, silk, plated goods, and other articles of common consumption. The expenditure of the court and the nobility forms the principal support of the inhabitants. Provisions and wine are abundant and reasonable; the surrounding country, which is equally fertile and beautiful, consisting for the most part of eminences covered with the above-mentioned vineyards, and valleys laid out in corn culture.

Würtemberg is one of the few Protestant states which a traveller passes through during a continental tour. The Dukes of Würtemberg were Protestant until 1772, when the reigning prince became a Catholic; giving, however, to his representative body the most solemn pledges that no change should be introduced into the religious establishment, and that even no new Catholic churches should be built. At the present time, on visiting any of the churches, their division into pews, the quiet devoutness of the congregation, the simplicity of the Lutheran service, and its resemblance in many points with our own established form of worship, cause the wandering tourist, who has been staying any time in Catholic countries, to feel almost and comparatively at home. This character, too, is imprinted on the very face of the country: for immediately upon quitting

Württemberg and entering Bavaria, you find that you have left a Protestant and arrived at a Catholic state.

Württemberg was elevated to the rank of a kingdom by Napoleon in 1806, and he made considerable addition to it by the territories taken from Austria.

At Stuttgart there is a curious old Palace, in which the Dukes of Württemberg formerly resided. The present residence of the Royal Family is a splendid building, situated at no great distance from the former, having a noble park attached to it, and within convenient reach of the museum, botanic garden, and opera-house. The interior presents a judicious combination of taste, magnificence, and comfort; and is particularly interesting to an Englishman from the circumstance of its having had an English Princess for its mistress. The Princess Royal, the eldest sister of his present Majesty William IV., became Queen of Württemberg in consequence of her marriage; and the portraits of George III. and his family, which adorn the walls, the carpets which are laid down in many of the apartments, and various little articles of English furniture, show that the Queen of Württemberg had not forgotten the comforts of her native home. If any fault could be found with the state rooms, it is that here, as in many other German palaces, they are overloaded with cut glass chandeliers; but perhaps an arrangement, which seems heavy by day, would only give additional brilliancy by candle-light. Several very tolerable pictures by Stuttgart artists (among which may be mentioned Adam, Eve, and Cain in one group; an equestrian portrait of Duke Ludwig, who was killed on horseback; and Joseph interpreting the dreams of his fellow-prisoners) are an honourable indication that the reigning family are anxious to foster the arts in their little metropolis.

But besides this noble palace, the King of Württemberg has several smaller residences in different parts of his dominions: in fact the number of establishments maintained by German princes in general is quite astonishing. The kings of England are satisfied with one palace at Brighton, another at Windsor, and a third in London; but a German Duke, whose dominions do not perhaps exceed one of the larger English counties, would not be content with twice the number. However, the King of Württemberg is one of the most moderate in this respect. I visited "The Solitude," a country palace where the king occasionally takes the diversion of shooting. Its name is most appropriate, for it stands quite isolated in the middle of a large tract of strictly-preserved country. The deer-park attached to it contains 1700 acres (*morgen*), and the sow-park (*sau-park*) or portion set apart for wild boars, which is contiguous to the other, encloses 700 acres. Never having seen any wild boars, we were particularly anxious to get a peep at some, and by taking a keeper, and putting ourselves under his guidance, we were fortunate enough to fall in with several. One we found sleeping at the foot of an oak, but his light slumbers were soon disturbed by the rustling of our footsteps among the underwood, and he trotted off with a surly grunt; two others afterwards rushed by us at full speed; and by stealing quietly along, we came upon a whole herd feeding with an old sow at their head. These also, however, darted into the thickets the instant they were aware of our approach.

These wild hogs (which after all scarcely deserve that title) have a regular feeding-place in the forest, to which they are accustomed to come at stated times; and a separate division is obliged to be provided for the young ones, as the old boars are so greedy that they would strike at the pigs with their terrible tusks, if they came too much in their way. It is at this feeding-place that the king and his court shoot, stationed in an elevated kind of summer-house, the

wild swine being driven there by the jägers or huntsmen. The animals, upon finding themselves thus taken, as it were, in a trap, become so infuriated, particularly if wounded, that in spite of the precaution that is taken of placing poles at convenient distances for the jägers to climb up, lives are frequently lost in this dangerous work of slaughter. The deer-park is stocked with red-deer (*hirsche*), fallow-deer (*dammhirsche*), and roe-deer (*rehe*); when a red-deer is white, as occasionally is the case, he is styled an *edelhirsch*, or noble-deer, and is accounted much more valuable than the common sort.

HUTTON'S LIFE, WRITTEN BY HIMSELF.

[Continued from No. 297.]

WE left William very busy in learning to play on the bell-harp. Having mastered that instrument, he borrowed a dulcimer, made one by it, and then learned to play upon it. In the fabrication of this instrument he encountered many difficulties, for he had neither wood to work upon, tools to work with, nor money to purchase either. "Necessity," he says, "is the mother of invention. I pulled a large trunk to pieces, one of the relics of my family, but formerly the property of Thomas Parker, first Earl of Macclesfield. And as to tools, I considered that the hammer-key and the pliers, belonging to the stocking-frame, would supply the place of hammer and pincers. My pocket-knife was all the edge-tools I could raise; and a fork, with one limb, was made to act in the double capacity of sprig-awl and gimlet. * * I quickly was master of this piece of music, for if a man can play upon one instrument he may soon learn to play upon others." Soon after, he sold his dulcimer to a baker's apprentice for 16s.—bought a coat with the money, and made a better instrument.

At Christmas, 1744, William's second servitude expired. He had now to launch into the world on his own bottom, and the thought gave him some uneasiness. He had served two seven years to two trades, neither of which he could subsist upon; and as a journeyman stockinger, his prospect, as shown by innumerable examples, was a half-starved life with the workhouse at the end of it. He however continued at his uncle's frame as a journeyman for two years; but a love of reading, which he had now contracted, led him to exercise his ingenuity in book-binding, and this gradually opened the path that conducted him to independence. "My first article of purchase was three volumes of the 'Gentleman's Magazine,' 1742-3 and 4. As I could not afford to pay for binding, I fastened them together in a most cobbled style. These afforded me a treat—I could only raise books of small value, and these in worn-out bindings. I learned to patch, procured paste, varnish, &c., and brought them into tolerable order, erected shelves, and arranged them in the best manner I was able." By constantly frequenting the shop of a poor bookseller, whose refuse he bought, and by watching him at his work (for he bound books as well as sold them), William soon learned to bind in a workman-like manner, and indeed soon excelled his prototype—which, probably, was no very difficult matter. "The first book I bound was a very small one, Shakspeare's 'Venus and Adonis.' I showed it to the bookseller. He seemed surprised. I could see jealousy in his eye." In the matter of tools Hutton worked on an unequal footing, for all that he could procure were the cast-off ones of the Nottingham bibliopole. But his perseverance and mechanical ingenuity made up the deficiency. He bought for two shillings a worn-down press which the bookseller had thrown aside for fire-wood, and this he so doctored that it worked perfectly well, and proved for forty-two years

his "best binding-press." Towards the end of 1746 his uncle died, leaving him a stocking-frame—no very profitable legacy, for trade was dead, and the hosiers would not employ him. He was advised to try Leicester, and walked to that place with half-a-dozen pairs of stockings to sell. He visited several warehouses, but, alas! all proved blank; they would neither employ him nor give him prime cost for his six pair of stockings. Here his heart sunk. "As I stood like a culprit before a gentleman of the name of Bennet, I was so affected that I burst into tears, to think that I should have served seven years to a trade at which I could not get bread." In these emergencies he was assisted by his sister Catharine, a most excellent and an extraordinary character, with whom he lodged in Barward Lane, Nottingham, and who got her own living by working hard at the spinning-wheel. At times he felt the gentle passion gaining an ascendancy over him; but he saw such misery among the married stockingers, that the thoughts of a wife were horrid to him. As a natural consequence of love he began to write verses. "This year (1747) I began to dip into rhyme. The stream was pleasant, though I doubt whether it flowed from Helicon. Many little pieces were the produce of my pen, which, perhaps, pleased; at all events they gave no offence to anybody, for they slept upon my shelf till the rioters burnt them at Birmingham in 1791."

He continued to improve himself in book-binding, and at length began to look out for work in that line. Everybody scoffed at the idea except his sister, who encouraged him by her conversation—aided him with her money; and at last a few jobs dropped in. A book-binder grafted on a stockinger was a novelty to the people of Nottingham. Hitherto he had only used the wretched tools and materials which his bookseller chose to sell him; but he found there were many things wanting, which he could procure only in London. The necessity of taking this journey was obvious, and so was the obstacle—he had no money! Here, again, he was helped by his sister Catharine, who was, indeed, a heroine of humble life; one of those noble spirits in obscurity, one of those generous spirits in poverty, whose exertions would be thought nothing of by the world, judging of them by a false scale; whose modest deeds never meet the light—as, indeed, they never were intended to do,—and whose virtues pass away without a record or a remembrance of any kind.

Hutton's account of his walk up to London is about the most interesting part of his very interesting memoir. He says, "My dear sister raised three guineas; sewed them in my shirt-collar, for there was no doubt but I should be robbed; and put eleven shillings in my pocket, for it was needful to have a sop to satisfy the rogues when they made the attack. * * * On Monday morning at three, April 8, I set out. Not being used now to walk, my feet were blistered with the first ten miles. I must not, however, sink under the fatigue, but endeavour to proceed, as if all were well; for much depended upon this journey. Aided by resolution I marched on. * * * A mile beyond Leicester I overtook a traveller with his head bound. 'How far are you going?' he asked. 'To London,' replied I. 'So am I; when do you expect to arrive?' demanded he. 'On Wednesday night.' 'So do I.' 'What is the matter with your head,' said I, 'have you been fighting?' He returned an equivocal answer, which convinced me of the affirmative. I did not half like my companion, particularly as he took care to walk behind me; but when I understood he was a tailor, my fears rather subsided.

"Determined upon a separation, I walked apace for half an hour. 'Do you mean to hold this pace?' said he. 'It is best to use daylight while we have it.' I

found I could match him at walking, whatever I might do at fighting. In half an hour more we came to a public-house, when he gave up the contest. 'Will you step in and drink?' asked my companion. 'No, I shall be moving on; you may overtake me.' I stopped at Brixworth, having walked fifty-one miles the first day; and my whole expense was five-pence. The next day, Tuesday the 9th, I rested at Dunstable. Passing over Finchley Common, on Wednesday, I overtook a carrier, who told me I might be well accommodated at the Horns, in St. John Street, Smithfield, by mentioning his name. But it happened, in the eagerness of talking, and the sound of his noisy cart, that he forgot to tell his name and I to ask it. I arrived at the Horns at five in the evening; described my director, whom they could not recollect: however, I was admitted an inmate. I ordered a mutton-chop and porter; but, alas! I was jaded. I had fasted too long; my appetite was gone, and the chop nearly useless. This meal (if it might be called a meal) was the only one during my stay, and, I think, the only time I ate under a roof. I did not know one soul in London, therefore could have no invitations. Nature is supported with a little, which was well for me, because I had but little to give her. If a man has any money, he will see stalls enough in London which will supply him with something to eat; and it rests with him to lay out his money to the best advantage. If he cannot afford butter, he must eat his bread without. This will tend to keep up an appetite, which always gives a relish to food, though mean; and the scantiness will add to that relish. The next morning I breakfasted in Smithfield, upon firmity, at a wheel-barrow. Sometimes I had a halfpennyworth of soup, and another of bread; at other times bread and cheese. When nature called, I must answer. I ate to live. If a man goes to London to *receive* money, it may take him a long time to transact his business. If to pay money, it will take him less; and if he has but a little to pay, still less. My errand fell under the third class. I only wanted three alphabets of letters, a set of figures, and some ornamental tools for gilding books; together with some leather and boards for binding.

"I wished to see a number of curiosities, but my shallow pocket forbade. One penny to see Bedlam was all I could spare. *Here* I met with a variety of curious anecdotes, for I found conversation with a multitude of characters. All the public buildings fell under my eye, and were attentively examined; nor was I wanting in my inquiries. Pass where I would, I never was out of the way of entertainment. It is reasonable to suppose that everything in London would be new and wonderful to a youth who was fond of inquiry, but who had scarcely seen anything. Westminster Abbey, Guildhall, Westminster Hall, &c., were open to view; also both Houses of Parliament, for they were sitting. As I had always applied deification to great men, I was surprised to see a hawker cram her twopenny pamphlet into a member's face; and that he, instead of caning her, took not the least notice. I joined a youth who had business in the Tower, in hopes of gaining admission. But the wardens, hearing a northern voice, came out of their lodge; and, seeing dust upon my shoes, reasonably concluded I had nothing to give, therefore with an air of authority they ordered me back. The Royal Exchange, the Mansion House, the Monument, the *gates*, the churches (many of which are very beautiful), the bridges, river, vessels, &c., afforded a fund of entertainment. I attended at Leicester House, the residence of Frederic, Prince of Wales; scraped acquaintance with the sentinels, who told me, *had I been half an hour sooner, I should have seen the prince and his family enter the coach for an airing.* Though I had walked 125 miles to London, I was upon my feet all the three days I was there. I

spent half a day in viewing the West-end of the town, the squares, the parks, the beautiful buildings for the fire-works, erected in the Green Park, to celebrate the peace of Aix-la-Chapelle. At St. James's I accosted the guard at the bottom of the stairs, and rather attempted to advance; but one of them put forward the but-end of his piece to prevent me from stepping over. At St. James's, too, I had my pocket picked of a handkerchief; so that I went home rather lighter than I came. * * * I could not forbear mentioning at night to my landlord at the Horns the curiosities I had seen, which greatly surprised him. He replied, 'I like such a traveller as you. The strangers that come here cannot stir a foot without me, which plagues me to that degree I had rather be without their custom. But you, of yourself, find out more curiosities than they can see, or I can show them.'

"On Saturday evening, April 13th, I set out with 4s. on my return to Nottingham; and slept that night at St. Alban's. Rising the next morning, I met in the streets the tailor with the muffled head, whom I had left near Leicester. 'Ah! my friend, what are you still fighting your way up? Perhaps you will reach London by next Wednesday. You guessed within one week the first time!' He said but little—looked ashamed, and passed on.

"I stopped that night at Newport Pagnell. My landlord told me my shoes were not fit for travelling: however, I had no others, and, like my blistered feet, I must try to bear them. The next day, Monday the 15th, I slept at Market Harborough, and on the 16th called at Leicester. * * * I reached Nottingham in the afternoon. I had been out nearly nine days: three in going, which cost 3s. 8d.; three in London, which cost about the same; and three returning, nearly the same. Out of the whole 11s., I brought 4d. back. * * * The journey furnished me with vast matter for detail among my friends."

He now looked out for a shop or shed in some market town, not too far off, where he could offer a few books he had for sale, and exhibit specimens of his binding to the farmers and peasants on market-day, intending to make stockings and do his other work at Nottingham all the rest of the week. Southwell was fixed upon: it was only fourteen miles from Nottingham, but the roads to it were then detestable. He went over at Michaelmas, took a shop at the rate of 20s. a year, sent a few boards for shelves, a few tools, and about 200 cwt. of trash (old books, &c.) which, he says, might be worth about a year's rent of his shop. He set up his shelves himself, "and in one day became the most eminent bookseller in Southwell"—which was not saying very much in those times. "During this rainy winter I set out from Nottingham at five every Saturday morning, carried a burthen of from three to thirty pounds weight to Southwell, opened shop at ten, starved in it all day upon bread, cheese, and half a pint of ale; took from 1s. to 6s., shut up at four, and by trudging through the solitary night and the deep roads five hours more, I arrived at Nottingham by nine; where I always found a mess of milk-porridge by the fire, prepared by my valuable sister. But nothing short of resolution and rigid economy could have carried me through this scene.

"In one of these early morning journeys I met upon Sherwood Forest four deer-stealers, returning with a buck. This put me in fear lest I should be knocked on the head to keep silence. I did not know them, but was afterwards informed that they knew me."

Finding great labour and little profit from the market-day concern at Southwell, in February the following year (1750) he took a journey to Birmingham, in order to see if there were any probability of succeeding in a shop there. He found there were

then three booksellers in Birmingham—Aris, Warren, and Wollaston; but he judged from the number, activity, intelligence, and prosperity of the inhabitants, that there might be room for a fourth in a small way; and he hoped that he, as an ant, would escape the notice or envy of the "three great men."

AGRICULTURE, GARDENING, &c. OF CHINA.

[Continued from No. 295.]

THE gentleman we have last named, who always, be it remembered, gives the least partial accounts of China, describes the state of agriculture in three provinces through which he passed.

"The province of *Pe-tche-lee*," says he, "embraces an extent of climate from 38° to 40½° of north latitude. The temperature is very various. In summer, Fahrenheit's thermometer is generally above 80° and sometimes at 90° during the day, and, in the middle of winter, it remains for many days together below the freezing point, descending occasionally to zero or 0. But it generally enjoys a clear pure atmosphere throughout the whole year. In the practical part of agriculture in this province we observed little to commend. The farmer gets no more than one crop off the ground in a season, and this is generally one of the species of millets, or holcus, or wheat; but they sometimes plant a bean between the rows of wheat, which ripens after the latter is cut down. They have no winter crops, the hard frosty weather usually setting in towards the end of November, and continuing till the end of March. The three different modes of sowing grain, by drilling, dibbling, and broad-cast, are all in use; but chiefly the first, as being the most expeditious, and the crop most easy to be kept from weeds; the last is rarely practised on account of the great waste of seed, and dibbling is used only on small patches of ground near the houses when they aim at neatness. The soil, being in general loose and sandy, and free from stones, is worked without much difficulty, but it seemed to require a good deal of manure; and this necessary article, from the paucity of domestic animals, is extremely scarce. Very few sheep or cattle were observed, yet there was an abundance of land that did not seem for many years to have felt the plough."

Complaining of the badness and scarcity of draught cattle, Mr. Barrow goes on to another province. "That part of the province of *Shan-tung* through which we travelled exhibited a greater variety of culture than *Pe-tche-lee*; but the surface of the northern parts was equally uniform. The soil, consisting generally of mud and slime, brought apparently by the inundations of rivers, contained not a single pebble. The season was too late to form any estimate of the crops produced upon the immense plains of *Shan-tung*; but the young crops of wheat, standing at this time (the middle of October) a few inches above the ground, looked extremely well. Little waste ground occurred, except the foot-paths and the channels which served as division marks of property. Some attempts indeed were here made at the division of grounds by hedge-rows, but with little success; the plant they had adopted, the *Palma Christi*, was ill suited for such a purpose. As we advanced to the southward in this province, the proportion of wheat under cultivation diminished, and its place was employed by plantations of cotton, whose pods were now ripe and bursting. The plant was low and poor in growth, but the branches were laden with pods. Like the wheat, it was planted or dibbled in rows. The cotton produced the second year was said to be considered as equally good with that of the first; but being found to degenerate the third year, it was then rooted out and the ground prepared for fresh seed." The southern parts of this province are composed of moun-

tains, lakes, and swamps, where the pursuits of agriculture give way to those of fishing, &c.

"The numerous canals and rivers," continues Mr. Barrow, "that in every direction intersect the province of *Kiang-nan*, and by which it is capable of being flooded to any extent in the driest seasons, render it one of the most valuable and fertile districts in the whole empire. Every part of it, also, having a free communication with the Yellow Sea by the two great rivers, the *Whang-ho* and the *Yang-tse-Kiang*, it has always been considered as the central point for the home trade; and, at one time, its chief city, Nankin, was the capital of the empire. That beautiful and durable cotton called nankin, or nankeen, is here produced, and sent to the port of Canton; from whence it is shipped off to the different parts of the world. Near most of the plantations of cotton here we observed patches of indigo; a plant which grows very freely in all the middle and southern provinces of the empire. The dye of this shrub not being an article of commerce in China, is seldom, if ever, prepared in a dry state, but is generally employed to communicate its colouring matter from the leaves, to avoid the labour and the loss that would be required to reduce it to a solid substance. We observed that, in the cotton countries, almost every cottage had its garden of indigo. In this province of *Kiang-nan* every man grows his own cotton; his wife and children spin it into thread, and it is woven into a web in his own house, sometimes by his own family, but more frequently by others hired for the purpose. A few bamboos constitute the whole machinery required for this operation."

Cotton seems to have been produced in all ages in this empire. Marco Polo mentions the peculiarity of the Nankin cottons, being woven of threads naturally coloured; and among the Chinese works on agriculture, collected and partially translated by Europeans, is a very voluminous one which details the whole process of cultivating the cotton from the seed to the web, and which takes into consideration the difference between the northern and the southern provinces; and all the varieties of climate, soil, &c., with rules adapted for growing the valuable plant under all those varieties. These rules are laid down with the usual minuteness of the Chinese; with a few exceptions, where probably they have been mistranslated, they seem judicious and appropriate; and judging from this work alone, it may be admitted that this singular people are not merely not deficient, but excel in writings on the science of agriculture. With the national disposition to make the most of everything, the Chinese, besides manufacturing the cotton produced, express an oil from the seed, and when the oil is expressed, use the seeds for manure; the capsules or pods, being hard and woody, they burn as fire-wood, and the leaves they give to their cattle, "so that," as the author observes, "every part of the vegetable is appropriated to some useful object."

The province of *Tche-kiang*, which is situated between the parallels of 28° and $34\frac{1}{2}^{\circ}$ of northern latitude, abounds, like that of *Kiang-nan*, in lakes, swamps, rivers, and canals; but, except a little rice, its produce is different, consisting chiefly in silk. The greatest attention is paid, of course, to the mulberry-trees with which the beautiful valleys and plains are covered. "Besides silk," says Mr. Barrow, "*Tche-kiang* produces camphor, tallow from the *Croton*, a considerable quantity of tea, oranges, and almost all the fruits that are peculiar to the country. Every part of the province appeared to be in the highest state of cultivation, and the population to be immense."

The province of *Kiang-see*, whose extent is from 28° to 30° , and whose great *Po-yang* river, and the swamps and morasses that surround it, render it the sink of China, is rather manufacturing than agricultural. Its

chief produce is sugar and oil from the *Camellia sesanqua*.

Mr. Clarke Abel gives an approach to a double crop of corn, as he observed it at *Tung-Chow*, on the *Pei-ho* river. "The *Holcus sorghum* and a species of *Panicum* were the most abundant corns here. The former frequently grew to the height of sixteen feet. The seed of this plant is sown in rows on the margin of rivers in a stiff soil; and when it begins to rise through the ground, the more humble *Panicum*, which ripens after its tall neighbour is cut down, is sown between them. Its seeds are fully developed before the tall corn is reaped, and only requires the solar light and heat, till then excluded, to ripen."

The able writer from whom we have last quoted, and Mr. Ellis, who was the companion of his journey, as also M. De Guignes the younger, and other recent travellers, give here and there descriptions of cultivation, &c., which would certainly place the state of Chinese agriculture higher in the scale than Mr. Barrow has done, though some of the positions of that gentleman must remain indisputable. The main defect seems to arise from the minute division of lands, and the absence of capital, either in the hands of one individual or in the possession of several individuals uniting together, and employing their funds to the same object, in the view of the same profit. Every cottage-farmer—and nine-tenths of the peasantry of China may be so called—cultivates his own land, and works it with infinite industry and considerable ingenuity; but such a circumscribed proprietor never can have good teams, &c., and consequently, on the great scale of agriculture, they cannot be compared to many of the nations of Europe.

The Catholic missionaries have bestowed much praise on a system of terrace-cultivation, as practised by the Chinese, which covers the sides of steep mountains with corn-fields, gardens, and groves. This certainly redounds to the credit of the industry of the Chinese, but their encomiasts committed a mistake when they implied that this method was peculiar to them. It is well known, and practised not merely on the mountains towards the head of the Lake of Geneva, between Lausanne and Vevay, which are cultivated with vines to their very summits, by means of having strong stone walls built at proper intervals, one above the other, which walls support the soil, and form little terraces on the side of the steep heights from the edge of the lake to the mountain-tops; but it obtains in many parts of Savoy, nearly all through the unequal rocky soil of the territory of Genoa, in some parts of Tuscany, in the territory of Piacenza in an especial manner, and in many other districts of Italy. To all these places may be applied what the missionaries say of the terrace-cultivation in China. "It is a very pleasant sight to behold cultivated mountains rising from fertile plains, and field above field, and grove above grove, like the steps of a gigantic staircase; and to watch with how much care, industry, and ingenuity the water is raised from one terrace to the other; or, in the rainy season, when it descends from the mountain-tops, to see how it is kept at bay, turned off, and distributed, without violence or damage done to the soil."

Mr. Barrow, M. De Guignes the younger, and Mr. Clarke Abel, have expressed their disappointment at the condition in which they found this terrace-cultivation in China. Mr. Abel in particular, who expected to see every mountain thus rendered productive, complains that he found many of them barren from the base to the summit, though equally capable of cultivation with those that were terraced; and that, in general, the system seemed confined to their ravines, their undulations, and gentler declivities. But it must be remarked, that these travellers saw merely a long, but a narrow strip of China, being permitted to go neither

to the right nor to the left of the line of their journey; and that in other parts of the empire, from the greater inequalities of the soil, a thicker population, a superiority of industry and energy in the inhabitants (and in so extensive a country the national character may well be supposed to vary by climate, &c.), the terrace system may not only be more prevalent, but even attain the excellence attributed to it by the missionary Du Halde, whose statements of matters of fact are generally admitted to be accurate even by those who occasionally differ from him, and had not the advantages of his wide observation and acquaintance with all parts of the empire.

Mr. J. F. Davis, however, in his recently published work, 'The Chinese: a general Description of the Empire of China and its Inhabitants,' coincides with Dr. Abel in his opinion as to the terrace-cultivation of China. He says, "There is, perhaps, no point relating to China that has been more over-stated, than the condition of its agriculture was by the early missionaries; probably in consequence of the contrast which it presented to the existing state of husbandry in Europe at the time when they wrote. The opinion formed by Dr. Abel was, 'that much as the Chinese may excel in obtaining abundant products from land naturally fertile, they are much behind some other nations in the art of improving that which is naturally barren.' They exhibit, however, great perseverance and skill, about the neighbourhood of Canton, in gaining muddy flats from the water by extensive and well-constructed embankments. The subject on which most exaggeration has prevailed is the system of terrace-cultivation, which certainly exists in hilly districts, and may even be seen from the vessels at Whampoa, but is by no means carried to the marvellous extent that has been supposed." He also remarks with respect to the keeping of stock, that "No good land is ever reserved in China for pasture, which in fact can scarcely be considered as forming a department of their husbandry. The few cattle that they have are turned out only upon waste lands, which are never improved by any sort of artificial manuring or dressing. To this must partly be ascribed the poor and stunted appearance of their cows and horses. The flesh of flocks and herds is scarcely tasted except by the rich, and no Chinese ever uses either milk, butter, or cheese. Not only has it been the care of the government, from the earliest ages, to give every direct encouragement to tillage, and to the production of food for man alone, but there have always existed some absurd prejudices and maxims against an extended consumption of flesh-food. The penal code denounces severe punishment against those who kill their own cattle without an express licence. It is a well-known principle that, where tillage exists to a considerable extent, the rent of land reserved for pasture must, in proportion to its goodness, be equal to that of land employed in producing grain; and this, under a rice-cultivation, where three crops per annum, or two of rice and one of vegetables, are said sometimes to be obtained, must have such an obvious effect in raising the comparative price of meat, as must discourage its consumption among a frugal people like the Chinese, even without the intervention of any positive law.

"There is accordingly no people in the world (the Hindoos excepted, and they use milk) that consumes so little meat, or so much fish and vegetable food; nor, again, is there any country in which fewer cattle are employed for the purposes of draught and burden. Where every institution tends to keep a population up to the very utmost limits of a bare subsistence, and where neither pride nor prejudice steps in between the labourer and his work, human exertion naturally supplants every other. In the southern parts of the empire, therefore, beasts of carriage and draught, with the

exception of a few miserable riding-horses and a few buffaloes for ploughing, are nearly unknown. Towards Peking and the borders of Tartary the case becomes altered; but the Great Wall may still be considered, generally, as the boundary that separates two people, one of them exclusively pastoral, and the other as exclusively tillers of the earth."

If we descend from the great scale of agriculture to horticulture, we certainly may find more to commend in the Chinese. Indeed, the way in which the cultivation of the ground is conducted by the peasantry ought rather to be called horticulture than agriculture, whether we consider its scale, system, or implements. The skill and industry of the Chinese in this department are chiefly evinced in raising the greatest possible quantity of vegetables from a given piece of ground. Even those who are not their panegyrists admit, without hesitation, that "let as much ground be given to one of their peasants as he and his family can work with the spade, and he will turn that piece of ground to more advantage, and produce from it more sustenance for the use of man, than any European whatsoever would be able to do." They work the soil incessantly, prepare it with the most scrupulous attention, and keep it free from the least weed. It appears, however, that they have no method of forcing vegetables by artificial heat, or of giving their plants the benefit of the sun's rays through glass, which at the same time excludes the cold air.

They have a method, which is generally practised, of propagating several kinds of fruit-trees. It is simply this:—"They strip a ring of bark, about an inch in width, from a bearing branch, surround the place with a ball of fat earth or loam, bound fast to the branch with a piece of matting; over this they suspend a pot or horn of water, having a small hole in the bottom just sufficient to let the water drop, in order to keep the earth constantly moist; the branch throws new roots into the ball of earth just above the place where the ring was stripped off: the operation is performed in the spring, and the branch is sawn off and put into the ground at the fall of the leaf; the following year it bears fruit." Mr. Barrow, from whom this account of the process is taken, says that the same method has of late years been successfully practised in Bengal. We have ourselves seen it in common use in several parts of the kingdom of Naples; and though not informed as to the period of its introduction there, are inclined to believe that the Italians owe it rather to the ancient Romans than to the Chinese.

A singular caprice in Chinese horticulture, in which, as in so many other things, they differ from the rest of the world, is, that the skill of their gardeners is not directed to increase, but to diminish, the size both of plant and fruit, in such a manner as to represent the original productions in miniature. Were an horticultural society established among them, the prize would thus be gained by the very smallest instead of the largest fruit.

[To be continued.]

CONSUMPTION OF FUEL IN FRANCE AND ENGLAND.

WITHIN the last three hundred years, the consumption of wood as fuel was much more common in this country than that of coal. In Camden's time (about 250 years since) coal was spoken of as being used in "many" places; but wood was the staple article of consumption, and it was then the most economical; for the forests with which the country was covered supplied a cheaper material than coal, on account of its being more readily obtained. As agriculture and population advanced, the use of coal increased; but the gradual diminution

in the supply of wood was not regarded at the time without alarm. Coal is in fact a more economical material for fuel than any other in a populous country; and it is more advantageous to appropriate the land to other purposes than that of producing fire-wood, though a woodland district may be devoted to the growth of timber for building purposes. An old and thickly-inhabited country like England finds it more profitable to obtain a supply of building timber from the primeval forests of America and the north of Europe; and the timber annually imported into England amounts in value to about 700,000*l.* France is in much the same position with regard to the fuel in general consumption as England was at an earlier period. There are coal-mines in forty different Departments; but the abundance of fire-wood produced in the forests is still sufficiently great to prevent coal being exclusively made use of; and the want of internal means of communication by canals also diminishes the use of coal. In England there is no place of importance, south of Durham, which is more than fifteen miles from a canal or navigable river; and thus articles of necessity, though bulky, are easily diffused, and the price is equalized to an extent which would not be possible if they had to be conveyed by land-carriage. But for these channels of traffic, places situated forty miles from a coal-district could not afford to obtain an abundant supply of coal, and the consumption would be exclusively confined to the rich. A deficiency in the means of transport prevents the working of collieries in some parts of France; for unless a large consumption be secured, the cost of machinery and the outlay for wages will not be repaid. The coal-owner has to compete with the forest-proprietor, while in England this competition has long since ceased. In the department of the Aveyron, the mines, if properly worked, would suffice for the supply of the greater part of France with coal; but, for the reasons stated, the quantity brought to the surface is very trifling. One-eighth of the soil of France is covered with woods and forests, and their annual produce is estimated at about 5,600,000*l.*, including timber for building and fire-wood. The annual produce of the coal-mines of Great Britain amounts to nearly 22,000,000 tons; and if the average cost be taken at 5*s.* 6*d.* per ton, the gross annual value at the pit's mouth will be rather more than 6,000,000*l.* The consumption of coal in France, for about one-half as many more inhabitants, is, perhaps, under one-fifth of the consumption of Great Britain. While in France there are many circumstances which discourage the working of coal-mines, an immense capital and the most improved machinery are applied to this department of industry in England; and the whole demand for fuel operating upon one article, it is brought into the market at the least possible cost. As the supply of fire-wood is not in the same degree inexhaustible, but is produced in certain quantities, according to a yearly average, it is in the nature of an increased demand to raise the price to a greater extent than in the case of an increased demand for coal; for the employment of more capital and labour soon reduces the prices of coal to a level, while a high price for fire-wood may cause the resources of future years to be diminished, and permanently raise prices. From this cause, the consumption of coal in France will doubtless increase, and, in the course of time, exceed that of wood.

The supply of London with coal has been noticed in a former Number of the 'Penny Magazine,' (No. 197). In 1835 the quantity entered in the port of London was 2,299,806 tons, which was brought in 7958 colliers, each vessel making several voyages in the course of a year. The price of the very best Newcastle coal is about 11*s.* per ton at the pit; about 20*s.* when it reaches London; and 30*s.* to the consumer, but much is sold

at lower prices. If the price paid by the London consumer averages throughout the year 25*s.* per ton, the sum paid annually for coal in the metropolis will be about 3,000,000*l.*, which, allowing one ton three cwts. to each head of the population, will average 32*s.* for each individual. If the consumption of coal in the metropolis for manufacturing purposes be taken into consideration, the cost to each individual on account of household consumption will be very much reduced. It is difficult to estimate the proportion consumed in various manufactures, and the exact quantity required for domestic use. In some of the great manufacturing towns the proportion of coal required in manufactories and workshops is three or four times greater than the quantity required for family consumption. In Sheffield the consumption of coal averages five tons for each head of the population, but three tons and a-half, at the least, are employed in connection with the staple manufacture.

A comparison between London and Paris as to the extent to which the population of each capital actually enjoy an abundant supply of fuel, will be very much in favour of London; for the necessity of having recourse to fires is not felt for so long a period of the year in Paris, and it is certain that the Parisians contrive to be cheerful without a fire, where an Englishman would often require one for "company," as it is sometimes alleged; yet the cost of fuel in Paris averages 38*s.* 6*d.*, and in London only 32*s.*, while the quantity used for manufacturing purposes is much greater in proportion in London than in Paris. The sum of 32*s.* goes twice as far in London in the purchase of fuel as 38*s.* 6*d.* in Paris; and fuel is consumed in the latter place chiefly in indispensable cases; while in England it is regarded as increasing the means of comfort and cheerfulness. The consumption of every kind of fuel in Paris amounts in value to 1,692,000*l.*, being nearly one-half the amount of the annual rental for all the houses in Paris, and two-thirds of the sum annually spent in wearing apparel. The consumption in 1827 was 1,065,166 steres of firewood, 4,007,459 fagots, 2,174,865 hectolitres of charcoal, and 938,722 hectolitres of coal. The population has increased considerably since 1827, and a proportional addition must be made to each of the above articles to exhibit the present consumption. Duties are charged on the admission of the above articles within the walls of Paris.

The supply of firewood is brought down by the Seine in rafts, of which about 4,500 arrive annually; but this number includes those which bring charcoal and timber for other purposes than fuel. The Seine rises in the department of the Côté d'Or, south-east of Paris, and receives the Yonne, the Aube, and the Marne before it enters Paris. It communicates with the Loire, the Saone, the Somme, and the Scheldt by canals. The greater the distance from whence the supply is brought, the more necessary it is that the wood should be seasoned so as to resist the effects of the water. If the bark has been stripped off at the time of the wood being cut, and then allowed to remain exposed, it becomes hardened, and is much better adapted for fuel. The degrees in which several kinds of wood differ in their specific qualities, and the degree of caloric which each of those qualities will give forth, have been investigated. The wood which is obtained from trees growing in a stratum of stones and gravel is much esteemed, and is brought by the Yonne from Bourgogne. The distance from Paris not being great, it does not receive injury by long contact with the water. Wood of an inferior description is used by the bakers. The poorer classes often use wood in nearly a green state, from a mistaken notion of economy; but the moisture which is disengaged neutralizes the effect of the caloric, and dry wood, of a higher price, would in reality be

more economical. There are two or three kinds of wood which are used on account of the pleasant perfume which they emit, and others on account of the clear and lively flame which attends their combustion. There is something extremely agreeable in a wood fire, on account of the cheerful blaze, the pleasant odour, and the absence of smoke and dust which characterize it; but this is a luxury of a very expensive description in Paris. To keep the embers in a smouldering state is the only means of preventing the cost of fuel from bearing a great disproportion to other household expenses. A composition of charcoal in the shape of small bricks is used to economize wood. Stoves, though not so common as in Germany, are still in extensive use in Paris; but an Englishman misses the agreeable sight of a blazing fire, and the warmth which a stove gives probably renders the air much more impure than a coal fire in an English fire-place. Charcoal is used in cooking only, and, as in some parts of the south of England where fuel is scarce, the fire is lighted and put out several times a-day. Of the coal consumed in Paris, the great proportion is used not by private families, but in manufactories and workshops. About one-fourth of the quantity raised in France is obtained from the mines in the department of the Nord, and the supply arrives at Paris by canal from Lille. One-seventh of the total quantity of coal exported by Eng-

land, or 104,138 tons, is imported by France, chiefly at Bordeaux and other towns on the coast, which find the cost of internal transport much greater than that of obtaining a foreign supply.

The Ile Louviers, one of the three islands formed by the Seine within the walls of Paris, is used as a depôt for fire-wood: it is about three-quarters of a mile in length. A depôt of this description (*chantier*) is represented in the cut.

The *charbonniers* form a class similar in some respects to the London coal-heavers, and are distinguished by a peculiarity of costume. They are said chiefly to come from one particular part of France, contrive by industry to accumulate a small capital, and then permanently retire to their native department. Before the revolution of 1789, a deputation of the *charbonniers* had the privilege of being admitted at court when any royal marriage or birth occurred. The market-women, or *dames de la halle*, enjoyed by courtesy a similar right. These distinctions, accorded under special circumstances to a fraction of the people by despotic monarchs, who regarded the mass of the people as incapable of exercising any power in the state, are now unknown, and would, in France, be inconsistent with the broad basis on which a constitutional monarchy reposes, when all classes are permitted to approach the throne.



[Wood-Yard and Raft on the Seine, Fauxbourg St. Antoine.]

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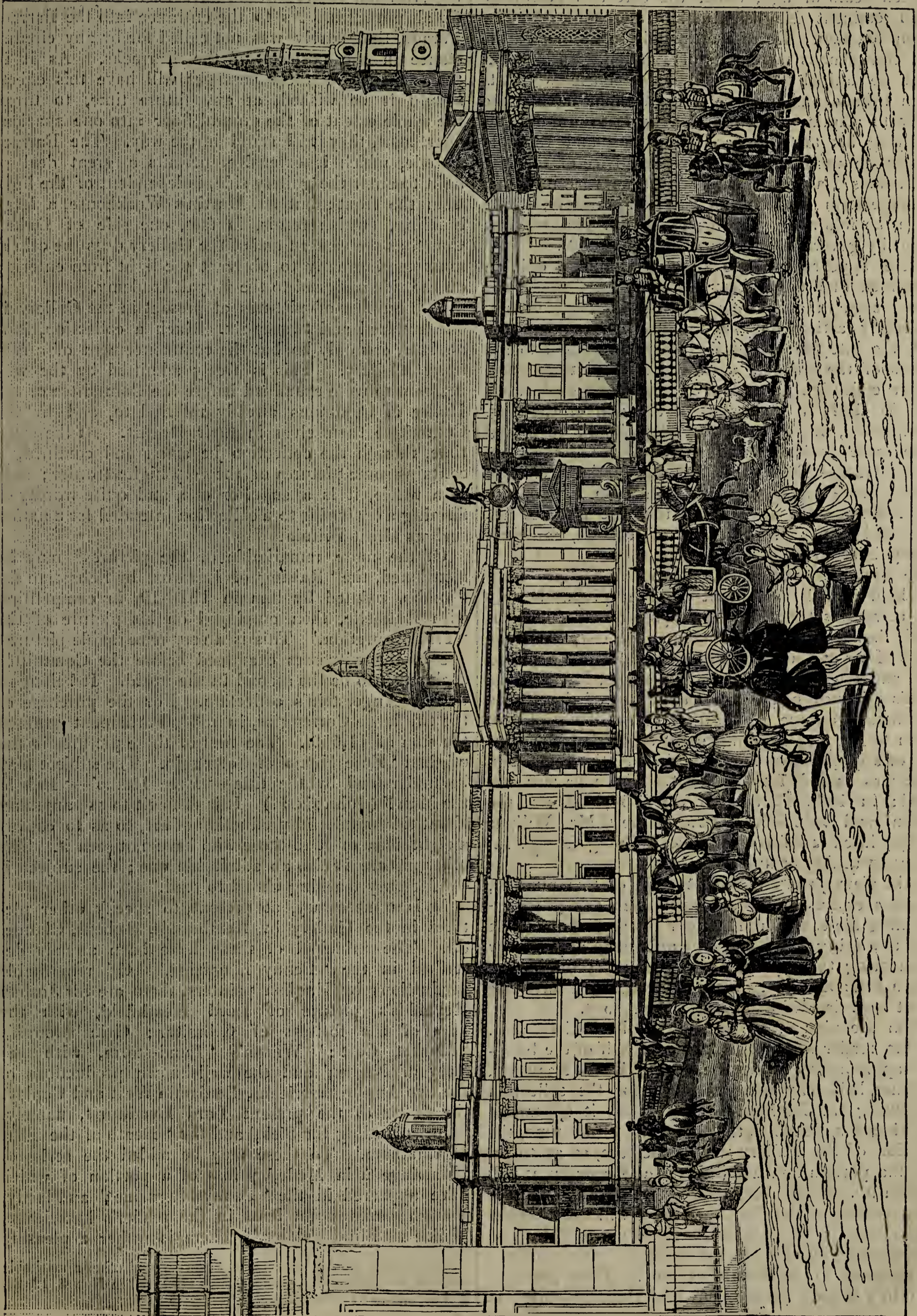
OF THE

Society for the Diffusion of Useful Knowledge.

299.]

October 31 to November 30, 1836.

THE NATIONAL GALLERY.



[National Gallery, with the proposed Improvements in Front.]

THE National Gallery, like the British Museum, arose out of the collection of a private individual. The only difference is, that Sir Hans Sloane directed his museum to be offered, after his death, to the nation on payment of a specified sum; but Mr. Angerstein merely ordered his pictures to be sold for the benefit of his heirs, not contemplating, perhaps, that they might form the nucleus of a national collection.

John Julius Angerstein was born at St. Petersburg, in 1735, and came to England when he was about fourteen years of age, under the care and patronage of an eminent English-Russian merchant, Andrew Thompson, Esq. He rose ultimately to be one of the most conspicuous merchants of London. In his character he united prompt and active business habits to an urbane and a cheerful disposition, having the ability to acquire wealth, and a heart to use it. In gratifying his taste, by collecting rare and valuable pictures, he was greatly aided by the advice of the late Sir Thomas Lawrence, with whom he was intimate. Mr. Angerstein died on the 22nd of January, 1822; and in the following year his gallery of pictures was bought by government for the sum of 57,000*l.*

There appears to have been a common opinion entertained that the gallery about to be formed was to be placed in connexion with the British Museum. Apparently acting on this supposition, in the year 1823, the late Sir George Beaumont presented to the trustees of the Museum a collection of pictures; and another collection of ancient pictures came into their hands in 1831, in pursuance of the will of the Rev. Holwell Carr, who directed that they should be placed in the same building with those of Mr. Angerstein and Sir George Beaumont. As the National Gallery has been made a separate institution from that of the British Museum, it so happens that the pictures are thus vested in two different sets of trustees, on behalf of the public.

The pictures forming the National Gallery have been kept in Pall Mall; but different proposals were made at various times for the purpose of obtaining an eligible building to receive them. At last, when the King's Mews at Charing Cross was about to be pulled down, and the site built upon for shops, Mr. Wilkins (see his evidence before the Committee of the House of Commons on the Application of the Principles of Design to Art and Manufactures) suggested the propriety of appropriating the space for a National Gallery, if one was intended to be built. The idea was approved; in 1832 Parliament voted 50,000*l.* for the erection, and in 1835, 12,000*l.* more. Mr. Wilkins was appointed architect, and the building is now rapidly approaching completion.

In the view given on the first page of this number, the engraver has introduced a proposed design for ornamenting the centre of Trafalgar Square. The vacant space, now lying waste, certainly affords an opportunity for rendering this square one of the most interesting spots in London. But we are not aware that anything has yet been decided upon with respect to it.

From the plan of the interior of the Gallery, at p. 469, the reader will remark that one half of the building is appropriated to the use of the Royal Academy, the other half only being assigned for the collection constituting the National Gallery. But it appears to be distinctly understood, that if, at any future time, the collection of the Gallery should increase, so as to require the portion now assigned to the Academy, it will be given up.

On looking at the plan, the reader will see that the ground floor is cut into nearly equal portions, by two passages, one on the Gallery side, the other on the side assigned to the Royal Academy. These passages lead into a barrack parade, and into Duke's Court. It

seems that a right of way through the King's Mews was enjoyed by the inhabitants of Castle Street, into which Duke's Court conducts; and when the Gallery was about to be erected, an express stipulation was made, that these passages should be left in the plan. It would be wrong to decide upon the impropriety of such an arrangement, without being fully aware of what the nature and value of the right enjoyed by the inhabitants were, although it might be thought that the egress and ingress afforded round the eastern end of the National Gallery would have been amply sufficient for all purposes. As to the entrance into the Barrack Parade, that surely was not called for by any circumstance in the position of the Barracks. As it is, the existence of these passages will have this effect: should it be wished, at any future time, to throw the whole extent of the ground floor into one spacious apartment, they will stand in the way. The Barrack Parade, which is extensive, permits a great deal of light to enter the gallery side, independent of the light from the front; but St. Martin's Workhouse, a large building, (which forms, in fact, one side of Duke's Court, as the eastern end of the Gallery does the other) must tend greatly to obstruct the light from entering on the side assigned to the Royal Academy.

The number of pictures at present in the Gallery is one hundred and twenty-six. Such a collection, it is obvious, can only be but the commencement of a *National Gallery*. This is freely admitted by the witnesses who were examined before the Committee of the House of Commons already referred to, and by the Committee themselves in their Report. At the same time, though the collection be small and confined, it contains some pictures of the very highest order; and, as a whole, it is a superior one, and quite worthy of forming a *beginning* to a collection intended for a nation such as Great Britain.

Of the more remarkable of the pictures* may be mentioned, the 'Raising of Lazarus,' by Sebastian del Piombo, painted by him in 1518-19, in competition with Raffaele, then employed on his picture of the 'Transfiguration.' This is a very remarkable picture; one of the witnesses examined before the Committee declared it to be the second in the world. It belonged to Mr. Angerstein's collection. For the purchase of the two large Correggios, in 1834, Parliament granted the sum of 11,550*l.* The first of these pictures is the original 'Ecce Homo' of Correggio. The subject may be understood by the title—'Ecce Homo'—'Behold the Man!' (John xix. 5.) It is difficult to say anything about this wonderful production of art, so as to convey a right idea of it to those who have not seen it. The other picture is also an admirable one; the subject is—'Mercury teaching Cupid to read.'

It is unnecessary, at present, to specify other pictures in the Gallery by Rembrandt, Rubens, Claude, &c. The principal of these have been already described in the 'Penny Magazine.' Of remarkable productions by English painters, there are Sir Joshua Reynolds's picture of Lord Heathfield, with the keys of the fortress of Gibraltar; Gainsborough's 'Market Cart;' Wilson's 'Land-storm, with the story of Niobe;' and the well-known productions of the two Anglo-Americans, Benjamin West and Copley, the father of the present Lord Lyndhurst, namely, 'Christ healing the Sick,' and the 'Death of the Earl of Chatham.' To these may be added the series of 'Marriage à la Mode,' prints of a portion of which have appeared in the 'Penny Magazine;' and lastly, though perhaps not least in the reader's knowledge, Wilkie's 'Blind Fiddler.' There is rather a pleasing

* Criticisms on the 'Raising of Lazarus,' and other remarkable pictures in the National Gallery, have appeared in Nos. 8, 12, 24, and 47 of the 'Penny Magazine.'

circumstance to be mentioned, connected with the gift of this last picture to the National Gallery. Sir George Beaumont, who, as already mentioned, presented, in 1823, to the trustees of the British Museum a collection of pictures, requested permission, in 1826, to withdraw two, which he deemed unworthy of being placed in a National Gallery, and to substitute two others for them, one of them being this picture of Wilkie's.

The National Gallery is open the first four days of the week to the public, and the other two to artists. As compared with the British Museum, the number of visitors has been small. The number in 1834 was 130,000, and in 1835, 127,268.

There is a beautiful passage in Wordsworth's 'Excursion':—

"Oh, many are the poets that are sown
By nature; men endowed with highest gifts,
The vision and the faculty divine;
Yet wanting the accomplishment of verse,
Which, in the docile season of their youth,
It was denied them to acquire, through lack
Of culture and the inspiring aid of books;
Or, haply, by a temper too severe,
Or a nice backwardness, afraid of shame."

This may be applied, in a lower sense, to the great multitude, many of whom, uneducated in the principles of art, and incapable of forming critical opinions, are yet able to enjoy the higher productions of art. Let one such enter the National Gallery, and select any of the celebrated pictures for an experiment upon himself. Say he stands before the 'Raising of Lazarus.' If he expects brilliant or gaudy colouring, he is of course disappointed. But he begins to fancy what might be the various emotions excited by the fact of "one raised from the dead." He remembers the various characters supposed to be present; the envy, rage, wonder, and devout admiration, which would be visible in the countenances of the spectators. Quietly examining the picture, the figures seem almost to breathe and live; passions of the most opposite kind speak in their faces. That which at first he perhaps ill understood, becomes full of intelligence; and he will probably quit its examination with a strong feeling of reluctance.

An anecdote told by the late Sir M. W. Ridley, in the House of Commons, on the evening of April 14, 1834 (when the grant for the purchase of the two 'Correggios' was voted), may illustrate this part of the subject. Two sailors visiting the Gallery, were attracted by a sea-view. One of them, struck with the apparent reality of a vessel sailing, loudly exclaimed to his companion, with a sailor's oath, "Jack, how well she sails!"

Of the good effects produced on the public mind by the free exhibition of works of art in foreign countries, much evidence was given before the Committee of the House of Commons on Arts, and their Connexion with Manufactures; from whose Report, and the accompanying Minutes of Evidence, much of the information communicated in this Supplement is drawn. The Committee in their Report say:—

"Few circumstances can more fully exhibit the hitherto exclusive nature of our institutions, than the fact that we have only just begun to form a National Gallery. The new building is now nearly completed. It is to be lamented that the whole edifice is not fire-proof. The portion allotted to the Royal Academy is not so. As, according to the plan, the officers and servants of the Academy reside on the premises, there will be fires in the Academic portion of the building; a circumstance which must, more or less, endanger the adjacent national collection. In the construction of the new picture gallery at Munich, the removal of all

danger from fire seems to have been particularly attended to.

"The subject of a catalogue, or description of the paintings, is an important element in a national collection. Besides a *Catalogue Raisonné*, Mr. Waagen, in the Berlin Gallery, and Baron von Kienze, in the Gallery at Munich, have placed in each compartment of the Gallery a descriptive map of the walls, by reference to which the spectator derives some brief information respecting the several pictures and their painters. It appears to the Committee that the most ready and compendious information would be given to the public by fixing its name over every separate school, and under every picture the name, with the time of the birth and death of the painter; the name also of the master, or the most celebrated pupil of the artist, might, in certain cases, be added. This ready (though limited) information is important to those whose time is much absorbed by mental or bodily labour. For their sakes, also, it is essential that the Gallery be opened, in summer, after the usual hours of labour. It is far better for the nation to pay a few additional attendants in the rooms, than to close the doors on the laborious classes, to whose recreation and refinement a national collection ought to be principally devoted.

"It appears to your Committee, that some portion of the Gallery should be dedicated to the perpetuation and extension of the British school of art. Pictures by living British artists of acknowledged merit might, after they have stood the test of time and criticism, be purchased for the national collection; especially such paintings as are more adapted, by their style and subject, to a gallery than a cabinet. A room might also be devoted to such engravings as have undergone a similar probation of public criticism. This encouragement appears to be due to the higher branches of engraving.

"It would be a great public benefit if the celebrated Cartoons from Hampton Court could be deposited in the National Gallery. That they could be preserved there with safety is the opinion of several eminent artists."

The Gallery of the Louvre at Paris is the admiration of all who visit it. The entire establishment is termed the Musée Royal, and is divided into departments. The department of the pictures is termed the "Musée des Tableaux." The ground floor contains a great range of rooms, termed the "Musée des Antiques," which is appropriated to ancient sculpture. The visiter of the Picture Gallery ascends a magnificent staircase, and enters what is called the "Salle d'Entrée," or entrance hall, and thence proceeds into another room, the "Grand Salon." From the "Grand Salon," the Great Gallery, a room 1332 feet in length, with a coved ceiling, and somewhat narrow), stretches before the eye. The architectural effect of this is very fine. The room is divided into portions by arches, each of which rests on four Corinthian columns, composed of rare marbles, between which are vases of porphyry, alabaster, &c., and busts. The first three portions of the room are devoted to the French School; the next three to the German, Flemish, and Dutch Schools; and the last three to the Italian and Spanish Schools. During the reign of Bonaparte, the Gallery of the Louvre was adorned by the choicest pictures of the Continent, carried off by him during his continental wars. According to a catalogue published in 1814, it contained 1224 pictures of the highest class, for none but *chef's d'œuvre*, or master-pieces, were admitted. When the allies occupied Paris in 1815, a great number of the most valuable of the pictures were removed, and restored to the countries from whence they had been taken. The number of pictures in the Gallery at present, according to the last catalogue, is 1406.

The Louvre is open five days of the week to all foreigners who show their passports. It is open on Saturdays and Sundays to the Parisians. One witness examined before the Committee of the House of Commons said,—“At Paris you will see the peasantry leave their baskets of vegetables in the market, and come to the Louvre to see the pictures.” Another said, “I often went to the Louvre, and I was very glad to see soldiers and people with their wooden shoes—I thought that a very fine sight.” During the Revolution of 1830, the populace entered the Louvre, but only two pictures were destroyed.

The following account of the preservation of the gallery of the Louvre during the Revolution of 1830, is extracted from ‘Paris and its Historical Scenes,’ in the ‘Library of Entertaining Knowledge.’ The time is the moment when the people, on the third of the Three Days, had broken into the Louvre, just before they mastered the Tuileries, and put an end to the conflict:—

“When the people entered the Louvre, a portion of them immediately made a rush into the great picture gallery. An armed and tumultuous multitude, heated by protracted conflict, and exalted by the intoxication of sudden victory, thus let loose amid so rich a store of the most precious and most fragile creations of art, might well strike a thrill of apprehension to the stoutest heart. But to the eternal honour of these brave men, most of them belonging to the very humblest class of the population, they felt more nobly than to stain their triumph over despotism by so terrible an outrage as they now had it in their power to perpetrate on the glories of civilization. One or two pictures only, which they would have been more or less than men if they could have looked upon at that moment without irrepressible exasperation, they destroyed with the same weapons and the same energy with which they had wreaked their vengeance on their living enemies. A splendid representation of the coronation of Charles X., by Gerard, and also a full-length portrait of that monarch, another master-piece of the same artist, were in a few minutes reduced to tatters, pierced by countless bullets. Let these unfortunate productions perish unregretted, in our respect for the sentiment, however wildly manifested on a wild occasion, which prompted their destruction, and in our gratitude that of so many works of genius, exposed to the same peril, these alone were injured. For the happy preservation of the treasures of this museum, France and the world are especially indebted to the exertions of a young artist, M. Prosper Lafaiist; who after having assisted in achieving the victory, employed himself, with the aid of a few trusty friends, in tranquillizing the first excitement of the people, when they found themselves masters of the building, and checking any tendency to disorder which might have been manifested by individuals. But the great mass of the crowd must have been animated by feelings similar to those of M. Lafaiist himself. On the walls of the Louvre and the houses of the neighbouring streets, a short admonition to the people, to respect the works of art, was written with charcoal, and the advice was not given in vain.”

An objection has been taken to the arrangement of the Louvre, which may be best stated in the words of a witness before the Committee of the House of Commons:—“What do you consider the defect or excellence of the Louvre?—The excellence consists merely in the superiority of some of the pictures. One of the principal defects is, that you are obliged to go the whole length of the room if you wish to get to the cream of the collection, which is at the end adjoining the Tuileries, in the Italian Gallery.

“What arrangement do you think is desirable in a national gallery?—I should think it advisable to have

a centre vestibule or hall, from which different galleries should diverge, so as to obviate the necessity of passing through several galleries to get at the one selected.”

The plan alluded to has been adopted in the new picture gallery at Munich, of which a view was given in No. 271 of the ‘Penny Magazine.’ Baron Von Klenze, the architect, thus describes to the committee the mode of arrangement:—“The gallery of paintings (or pinacotheca) is destined to receive all those objects of art which are represented upon a plain surface; that is, those which have no relief, such as pictures, drawings, enamels, glass painting, mosaics, &c. The first floor contains the pictures, and the entrance floor contains the other objects. With respect to the pictures, this is the system which has been adopted: they are placed according to the schools. I wished to allow the possibility of arriving at any particular school without going through another; and for this purpose I have a corridor running the whole length of the building, which communicates with each separate room. The large pictures are in very large rooms, lighted from above; the smaller pictures are in small rooms, lighted with a side light from the north; such is the general disposition. The rooms are so arranged, that the spectator is not annoyed by reflected lights; but wherever he stands, he sees the pictures without any reflection. With regard to the classing of the pictures, there is, first, a large antechamber, which is extremely richly ornamented, but only with white and gold: no colour. It is ornamented with six large pictures, portraits of the founders of the gallery. There is a room attached for restoring pictures and for copying, upon a special permission being given to take down a picture from the walls of the gallery for that purpose; it serves also for the exhibition of pictures newly purchased. The first large room is for the ancient Flemish school, with three rooms attached for the smaller pictures; after that a great room for the ancient German school, with four small rooms; then three large rooms for the more recent Flemish school, with ten small rooms; then a room for the French and Spanish schools; and then three large rooms, one of which is ninety-three feet long, for the Italian school, and three small rooms for the smaller pictures. Then there are some rooms attached for the subordinate purposes of the gallery. Then, on the entrance floor, there is a gallery for engravings; one for original drawings of the great masters. There is a considerable space for ancient paintings, such as the ancient terra cotta vases, mosaic; and the other rooms are for paintings executed by means of fire, such as glass, porcelain, enamels, &c.”

The peasants are stated to come from the mountains, almost from the plough, and wander through this gallery with the most perfect freedom.

Dr. G. F. Waagen, director of the Royal Gallery at Berlin, thus describes it:—“In Berlin, the museum is open on all days throughout the year, except Sundays, from ten till four in summer, and from ten till three in the winter; the holidays are about ten or twelve in the year.

“How many days are required for cleaning the museum in the course of a year?—Every day, after the people have left, the whole museum is cleaned.

“It is never closed for the purpose of being cleaned?—No.

“Is it necessary, in order to enable the students to copy, to exclude the public?—At Berlin we never exclude the public for the purpose of accommodating the artists. We pursue the same course which is pursued in the famous gallery at Dresden, where the public are constantly present when the artists are at work; and the artists are completely accustomed to it.

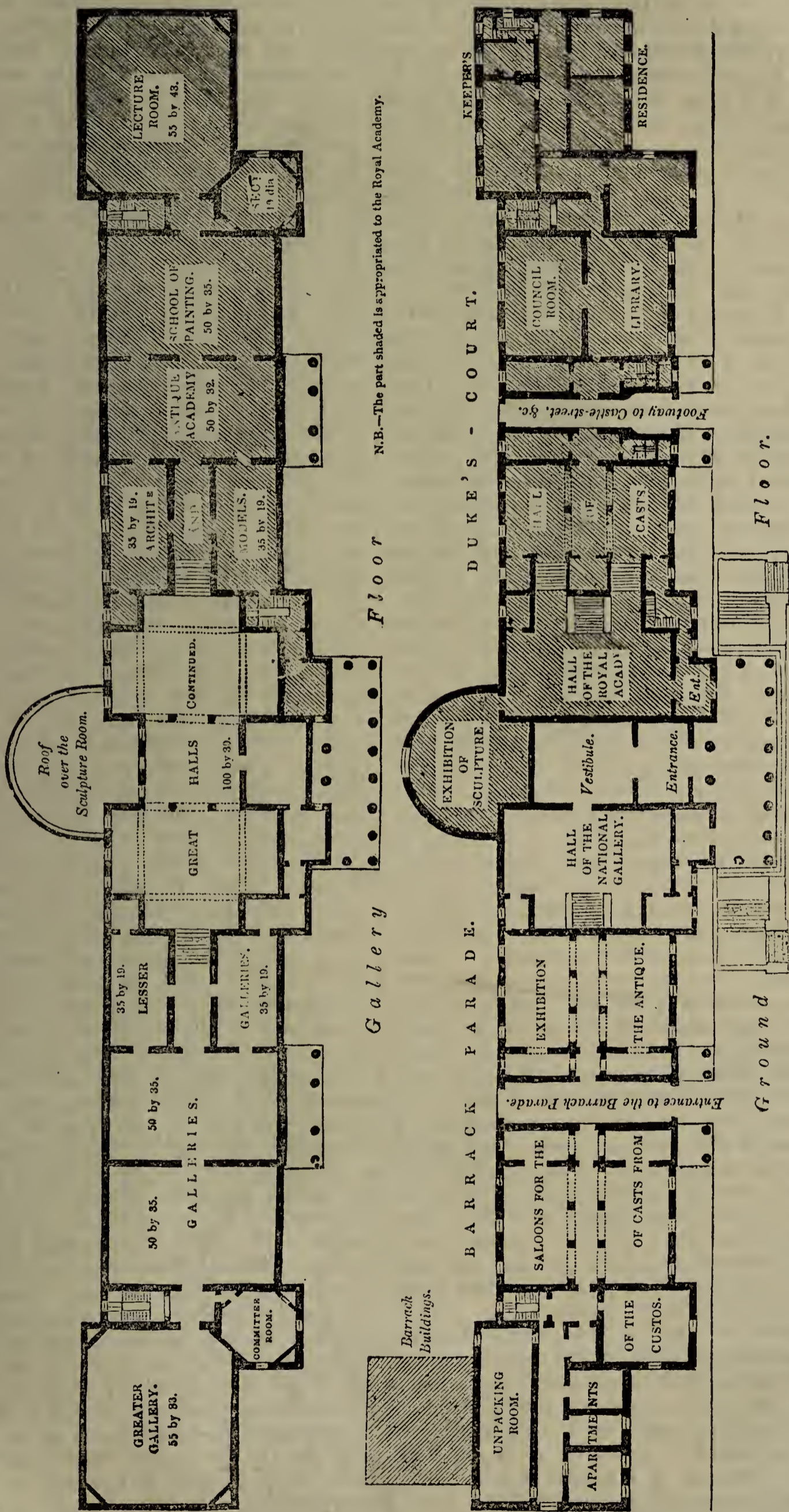
“In your opinion, it is not necessary to exclude the public for the purpose of instructing the artists?—No.

“What number of visitors have you at the Berlin Gallery in the course of a year?—We have about 50,000.”

Mr. Samuel Woodburn, a witness before the Com-

mittee, speaks very highly of the collection of pictures at Madrid, which he considers to be finer than that of the Louvre. He is asked, “Which do you think, in point of valuable pictures, the next best to the Spanish

PLAN OF THE NATIONAL GALLERY.



and French collections?” “The Grand Duke’s at Florence, if you include those of the Palais Pitti pictures; and then there is also the Pope’s collection, a collection which is very fine, having the ‘Transfiguration,’ by Raphael. It is difficult to put them in absolute order, for every government in Italy has a collec-

tion of fine pictures; even the duchy of Parma, a very small state, has a fine collection; the fine arts are considered a part of the affairs of the government.”

Mr. Leigh, speaking of Frankfort, says:—“The museum at Frankfort, denominated “Städelsches Kunstinstitut,” or the “Städel Academy” of arts,

unites the advantage of a state museum and academy. There is the permanent exhibition of the pictures bequeathed by the eminent banker Städel, increased by subsequent donations; and there is the modern gallery, appropriated to the use of the Society for the Encouragement of Living Artists, whose works are purchased by the Society, and disposed of by raffle among the members. I do not consider this gallery a model for the museum of a great nation; but it is one of the most pleasing, in point of effect, to be met with in second-rate towns."

Mr. Solly stated that the number of pictures in the gallery at Berlin was about 700 or 800; in the different palaces at Munich about 7000; of which about 1600 are expected to be brought together in the Pinacotheca; and that in the different imperial palaces at St. Petersburg, there are between 4000 and 5000.

Instruction in the principles of art forms a portion of the national system of education in Prussia. There is a *Gewerb-Institut* at Berlin, for the purpose of giving instruction in manufactures connected with arts. Connected with this principal institution, there are four schools of design, in Breslau, Königsberg, Dantzic, and Cologne. The whole is under a director, whose name at present is Beuth, a privy councillor of finance. The pupils are recommended from the provinces by the government president, and sent to Berlin. They must have a knowledge of some manufacture; and must be also able to read and calculate, in order to be received into the institution. If they do not show any aptitude after being in the institution for some time, they are dismissed. There is no particular class out of which the candidates are chosen; any person may recommend a young man, who has a taste for any particular art, to the president. When the pupils have finished their course, they receive a certificate of attendance from the president; and those who have been distinguished in any particular department or manufacture, have afterwards no difficulty in finding employment.

In Bavaria, the art of design forms, as stated by Baron Von Klenze, an integral part of the national education. "In every school with us," says the Baron, "in fact in every village school, drawing is taught. There are, at this moment, thirty-three real schools of design established; there are thirty secondary schools for artisans, called "*Gewerb-schulen*," and three primary or polytechnic schools. If any one of the [village] scholars wishes to devote himself to any particular branch of art, then he enters in one of the thirty secondary schools which I have mentioned. In those secondary schools, instruction is given to all those who are to be devoted to the arts and to manufactures, to civil engineering, to architecture, to roads and bridges, and even to agriculture, because there are schools of agriculture, and to waters and forests. In those secondary schools they remain three years; after those three years are expired, the young people determine what branch they will embrace, as I have just said, and then they enter the polytechnic schools, and there they finish their education."

Professor Beuth, the director of the Berlin *Gewerb-Institut*, has published a work, at the expense of the Prussian government, with copper-plate engravings, which gives to the pupils models of antiquity and of the middle ages. "It is stated," say the Parliamentary Committee, "on the high authority of Baron Von Klenze, that the influence of Professor Beuth's publication is already perceptible in the shops and dwelling-houses at Berlin. Encouraged by the success of this experiment, the Bavarian government is about to issue similar, but cheaper, works for the benefit of the workmen of Bavaria."

The Committee, in their Report, advert with regret to the inference which they are obliged to draw from the evidence laid before them—that "from the highest

branches of poetical design down to the lowest connexion between design and manufactures, the arts have received little encouragement in this country. The want of instruction in design among our industrious population, the absence of public and freely open galleries containing approved specimens of art, the fact that only recently a National Gallery has even been commenced among us, have all combined strongly to impress this conviction on the minds of the Committee. In many despotic countries far more development has been given to genius, and greater encouragement to industry, by a more liberal diffusion of the enlightening influence of the arts. Yet, to us, a peculiarly manufacturing nation, the connexion between art and manufactures is most important; and for this merely economical reason (were there no higher motive), it equally imports us to encourage art in its loftier attributes; since it is admitted that the cultivation of the more exalted branches of design tends to advance the humblest pursuits of industry, while the connexion of art with manufacture has often developed the genius of the greatest masters in design.

"The want of instruction experienced by our workmen in the arts is strongly adverted to by many witnesses. This deficiency is said to be particularly manifest in that branch of our industry which is commonly called the fancy trade; more especially in the silk trade; and most of all, probably, in the ribbon manufacture. Mr. Martin (the celebrated painter) complains of the want of correct design in the china trade; Mr. Papworth (an eminent architect) of its absence in the interior decorative architecture of our houses, and in furniture. Hence the adoption of the designs of the era of Louis XV. (commonly dignified with the name of Louis XIV.) a style inferior in taste and easy of execution. To a similar want of enlightened information in art, Mr. Cockerell attributes the prevailing fashion for what is called Elizabethan architecture, a style which (whatever may be the occasional excellencies of its execution) is undoubtedly of spurious origin.

"This scanty supply of instruction is the more to be lamented, because it appears that there exists among the enterprising and laborious classes of our country an earnest desire for information in the arts. The ardour for information is apparent in Birmingham, Sheffield, and in London; and the manufacturing workmen in the neighbourhood of Coventry have (to their great honour) specifically petitioned the House of Commons for instruction in design.

"It appears that the great advantage which foreign manufacturing artists possess over those of Great Britain, consists in the greater extension of art throughout the mass of society abroad. Art is comparatively dear in England. In France it is cheap, because it is generally diffused. In England a wealthy manufacturer has no difficulty in procuring superior designs. Our affluent silversmiths have called to their aid the genius of Flaxman and of Stothard. But the manufacturer of cheap plate and inferior jewellery cannot procure designs equal to those of France, without incurring an expense disproportioned to the value of the article on which his labour is employed. According to the evidence of Mr. Guillotte, a maker of Jacquard looms (a gentleman who does the fullest justice to the English manufacturers), a French capitalist employs three or four artists, where in England one artist would supply eight or ten manufacturers. This is exemplified in the process called by the French the *mise en carte*, or the practical transfer of the pattern to the fabric into which it is to be wrought. It appears that in England the designer of the pattern and the person who applies it to the manufacture are distinct persons. In France the workman is himself the artist. The French have long been celebrated for their attention to design in manufactures. Their zeal in this

pursuit is nowhere more manifest than in their recent prosecution of the shawl trade—in the introduction both of the material and pattern of the Cachemire shawl by M. Ternaux, and in the later investigations of M. Couder. M. Couder has established a school for shawl designs at Paris; he has succeeded in tracing the original designs on the shawls of Cachemire through all the imperfections of the native manufacture, and supplied his country with the genuine pattern.

“Much importance has justly been attributed to the schools of design so generally diffused through France. These schools (in number about eighty) are superintended by the government. The free, open, and popular system of instruction (so prevalent in France since the days of Colbert), and the extreme accessibility of their museums, libraries, and exhibitions, have greatly tended to the diffusion of a love of art, as well as of literature, among the poorer classes of the French.”

The Committee recommend “the formation of open public galleries or museums of art in the various towns willing to undertake a certain share in the foundation, and to continue the maintenance of such establishments. The larger towns of France are generally adorned by such institutions. In this country we can scarcely boast of any. Our exhibitions (where they exist) are usually periodical. A fee is demanded for admission, and modern works only are exhibited. From such exhibitions the poor are necessarily excluded. Even those who can afford to pay seldom enjoy the advantage of contemplating perfect specimens of beauty, or of imbibing the pure principles of art. If the recommendation of the Committee were adopted,—that the opening of public galleries for the people should, as much as possible, be encouraged,—casts of the best specimens of sculpture might be advantageously transmitted from the metropolis to the different towns. Casts are cheaply supplied in Paris under the superintendence of an artist; and a tariff, indicating their several prices, is issued for the benefit of the public. This example is worthy of imitation. But besides casts and paintings, copies of the arabesques of Raphael, the designs at Pompeii, specimens from the era of the revival of the arts, everything, in short, which exhibits in combination the efforts of the artist and the workman, should be sought for in the formation of such institutions. They should also contain the most approved modern specimens, foreign as well as domestic, which our extensive commerce would readily convey to us from the most distant quarters of the globe.

“It appears that among our workmen a great desire exists for such public exhibitions. Wherever it be possible, they should be accessible after working hours, and admission should be gratuitous and general. A small obstruction is frequently a virtual prohibition. The vexatious fees exacted at Westminster Abbey, St. Paul’s, and other public buildings, are discreditable to the nation. In the Abbey at Westminster, not only is a fee demanded at the door, but supplementary fees are extorted in different portions of the building.

“An intelligent witness, Mr. Nasmyth, suggests the great advantage which manufacturers would derive from themselves encouraging a knowledge and a love of art among their workmen. The exhibition of works of proportion and of beauty in rooms connected with factories would have a beneficial effect on minds already familiar with geometrical proportions. Scientific improvements in machinery, and economy in the construction of it, are both intimately connected with perfection of form. Mr. Cowper has shown that the application of art to a material not only encourages but sometimes creates a manufacture. Were the Arts more extensively diffused among our population, many articles, such as marble, terra cotta, wood, and ivory (a material to which art is much applied in France) would give additional employment to the people.

“It has been generally admitted, both by artists and by manufacturers, that access to botanical gardens would have an excellent effect on our industrious population. The French study more closely than we do the living flower, and their imitations of plants are generally acknowledged to be more correct than ours.”

Professor Waagen thus describes to the Committee his view of the way in which the great painters of a former period were educated:—

“When we consider the various methods by which the arts have been taught at different periods, we observe, from the thirteenth century downwards, at which time the fine arts awoke into new life, to the middle of the sixteenth century, and in many countries to the middle even of the seventeenth, the arts were taught after the manner of artisans, then very young, from the age of ten to twelve years. The artist entered into the workshop of the master artist, and made himself, while quite young, master of the technical part of the art; and, as he was permitted to behold works while under the hand of the master and his best scholars, he had a vivid conception of the art, and he had an opportunity, by seeing the practice, of turning it to the best account in the different branches, as, for example, drawing, painting, modelling, and so forth. The master had an interest in the earlier attainment of knowledge in his scholar, as he expected assistance from him in his productions, and it was important to him to be able soon to entrust to him works of greater importance. When the scholar felt himself so much advanced that he could execute works of his own composition, he then quitted the workshop of his master, in order to work on his own account. According to this simple mode of instruction, art is indebted for its greatest works. From such workshops as these came forth masters such as Leonardo da Vinci, Michael Angelo, Raphael, Titian, and Correggio. The great masters in the Netherlands school, Rubens, Rembrandt, Cuyp, Ruysdael, Hobbima, and many others, whose works every man of taste admires, were formed in the same way.”

One great source of the higher productions of art in painting is the association of it with religious feeling, especially in Catholic countries. Some of the noblest paintings in the world were produced to adorn the interior of churches. The ‘Raising of Lazarus,’ in our own national collection, for instance, was painted by order of Cardinal de Medici, then Archbishop of Narbonne, in France, for the principal church of that city. The wood-cut on the last page of this Supplement, representing the interior of Antwerp Cathedral, exhibits the position in which Rubens’ ‘Descent from the Cross’ is placed. (An engraving and description of this celebrated picture is given in No. 150 of the ‘Penny Magazine;’ an account of Antwerp Cathedral in No. 46; and a life of Rubens in No. 14.)

Mr. Haydon, the historical painter, was asked, before the Committee, “Why is it that England has never established an historical school as in other nations?” In his answer he gives a sketch of the history of art in this country, and shows how the change in religion produced a revulsion of feeling with respect to art. About the year 1770, Sir Joshua Reynolds, and other leading artists, proposed a scheme for decorating St. Paul’s with scriptural paintings, offering their works gratuitously—but the project was rejected. Before that period, Thornhill (the father-in-law of Hogarth) had painted the dome of St. Paul’s.

Mr. Haydon contends that an annual parliamentary grant should be passed for the encouragement of historical painting in Great Britain. But if our national character precludes the hope of historical painting being generally encouraged for the ornament of our churches, so our governmental polity seems to shut out the hope of an annual grant. Yet something should be done nationally; it seems reasonable that our public buildings

should be suitably adorned: our new Houses of Parliament afford a fine field for the encouragement of English historical painting. This is the opinion of many witnesses, and of the Committee. Professor Waagen says, "The construction of the new Houses of Parliament would afford an honourable opportunity for it, and national art would produce a more respectable or-

nament in their walls than the most splendid and costly hangings. For several reasons, fresco painting* might herein be employed to advantage."

* *Fresco* is an Italian word, meaning literally, fresh; fresco painting is painting on walls when they are still new, by which the colours are indurated with the drying of the walls.



[Interior of Antwerp Cathedral, with the Picture of the Descent from the Cross by Rubens.]

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THE CHEVROTAIN.



[The Chevrotain.]

AMONG the order of Ruminating Mammalia, is a group to which Linnæus gave the title of *Moschus*, from the circumstance of one of the species producing that well-known substance called musk, the secretion of a peculiar glandular pouch on the abdomen of the male; for the sake of which the animal is eagerly hunted in the regions it frequents, namely, the high mountain ranges in China, Thibet, Tonquin, Pegu, and also southern Tartary. The musk deer (*moschus moschiferus*, Linn.) is the only one of this group in which this secretion is produced; it differs from the other species also in its adaptation to an elevated and rocky abode; its limbs are strong, its hoofs short, broad, and expanded; and the posterior rudimentary hoofs are very large and almost touch the ground. In consequence of these and other details, naturalists have now removed the musk deer into a separate genus, and converted the generic appellation of Linnæus, into a family title, viz., *moschidæ*, or the musk tribe. The *moschidæ* closely resemble the deer in their general form and appearance, but they resemble them in miniature, for with the exception of the true musk, which equals a roebuck in size and stature, the rest are all extremely small; they are indeed the smallest of the Ruminating order, and

the most beautiful; their eyes are large, dark, and beaming with a mild yet animated expression; the head is elegantly formed, and tapers to a slender nose; the ears are moderate and open; the haunches elevated and round, and the limbs delicately slender and tapering to narrow pointed hoofs.

It is with the deer tribe alone, among all the *Ruminantia*, that the musk tribe can possibly be confounded; but they differ from the deer in many points of their detail. In the first place they are altogether destitute of horns, and also of the suborbital pits, which are so common in the animals of that group. As in most ruminants (the camels and lamas excepted), the molar teeth are six on each side, above and below, but the two first molars are elevated into cutting edges and points, and the other four have their crowns studded with acute tubercles; there are no incisors in the upper jaw, and eight in the lower, as in the deer, sheep, and ox; but the males are furnished with large canines in the upper jaw, which project downwards and come out from between the lips; these canines are compressed, pointed, arched backwards, and have a sharp posterior cutting edge. In the true musk they are at least three inches in length, and are doubtless used as weapons of

defence. Setting aside the musk, the other members of this group are termed Chevrotains. They are respectively natives of Ceylon, and of Java and Sumatra, and it is not improbable that they extend to other islands adjacent. The chevrotains are themselves divided by some naturalists into two genera, *Meminna* and *Tragulus*; the former distinguished by the metatarsus, or cannon bone of the hind limbs, being covered completely with hair, except a little below the hock, where there is a naked prominence; by the fur being rather soft and full, and by the hoofs being not so slender as in the next genus, *Tragulus*, which is characterized by the hinder part of the cannon bone being naked, the hair of the body close and smooth, and also by the presence of a naked glandular space under the chin, moistened with a fluid exudation.

It will suffice us to have stated these distinctions, which are useful only in a scientific point of view, nor shall we drop the term *moschus*, as applied to the chevrotains, the general history of which, rather than an account of minute distinctions between them, is our immediate object.

Of the chevrotains the *meminna* is the largest; being about eighteen inches in length, and of proportionate stature. It is a native of Ceylon, but of its habits we have no account. In all probability they resemble those of the following species. Its colour is olive gray, the sides being dappled with white, which is the colour of the throat and under parts.

Two better known species, as it respects habits and manners, are the napu chevrotain (*Moschus Javanicus*, Raffles), and the kanchil (*Moschus Kanchil*, Raffles), both natives of Java, where Sir Stamford Raffles obtained much information concerning them. Of these elegant species the napu is the largest, being about equal to a full-grown hare, but not so long. Its colour is ferruginous brown above, and white beneath the chest; having two longitudinal dusky stripes, so as to make a central and two lateral broad lines of white, below which passes a transverse band of pale yellowish fawn; the two lateral bands extend nearly to the shoulders on each side. The muzzle, which is naked, is black, with a tinge of flesh-colour, as are also the ears, which are nearly naked. The tail is rather short, and white at the tip. In its manners the napu is mild and gentle, and soon becomes reconciled to captivity. It bears our climate well, with care; and though never familiar, is perfectly at its ease, appearing indeed indifferent to what is passing around it. Though destitute of marked intelligence, its graceful form, its agreeable colouring, and its full dark eyes, render it an interesting object. In its native region it gives preference to thickets, and districts overgrown with brushwood near the sea-shore, seldom visiting the forests in which the kanchil takes up its residence. It is inferior to that species in speed, activity, and cunning; and is therefore more exposed to danger from beasts of prey, with which the deep forests abound, and hence it prefers to lurk in coverts nearer the vicinity of man, from whom it can more easily conceal itself than from the watchful eyes of its feline enemies, within the immediate precincts of whose haunts it fears to intrude. Its food consists of berries, &c.

The kanchil is lighter and more spirited than the napu, and considerably smaller; independent of the difference in size, it is easily distinguished by its darker colour, by a broad stripe of dark chesnut, verging upon black, which runs down the back of the neck, and by the width of the band across its chest. Of all the chevrotains this is the most active and elegant; indeed, its address and resolution are the theme of common discourse in its native country, and the most extraordinary instances are related of its cunning. Unlike the napu, it resides in the depths of the mighty forests which

cover so large a portion of its native island, feeding chiefly on the fruit of the kayo-briang (*Gmelina villosa*, Roxb.); and though it will live in confinement, it endures captivity with great impatience and restlessness; the moment an opportunity offers for escape, off it bounds, making for the forest, the deep recesses of which afford it a welcome refuge. Such are its cunning and alertness, and so prompt is it with expedients when pressed by danger, that, as Sir Stamford Raffles informs us, "it is a common Malay proverb to designate a great rogue to be as cunning as a kanchil;" and he adds, that "of this cunning many instances are related by the natives. If taken in nooses laid for them, these animals will, when the hunter arrives, stretch themselves out motionless, and feign to be dead; and if he is deceived by this manœuvre, and unties them, they seize the moment to start on their legs, and disappear in an instant. A still more singular expedient, however, is mentioned; that when closely pursued by dogs the kanchil will sometimes make a bound upwards, hook itself on the branch of a tree by means of its crooked tusks, and there remain suspended till the dogs have passed beneath." In this extraordinary address and activity it surpasses every other species; indeed, none except the kanchil have gained a reputation for these qualities, although all are light-limbed, free, and vigorous. It is this species which is represented in our cut.

Besides the kanchil, Sir Stamford Raffles alludes to another species, called by the Javanese, *pelandoc*, distinguished by a more robust form of body and by larger eyes. Of its habits little or nothing is known, nor does it appear that Sir S. Raffles himself ever saw the animal. In a paper in the 'Proceedings of the Zoological Society,' Mr. Gray thinks it probable that the pelandoc may be identical with a species described by him as *moschus fulviventis*, which is the "*jeune chevrotain*" of Buffon (vol. xii.) It is very like the kanchil in colouring, but differs in having the under surface pale fulvous, with four white streaks, and in the lateral streaks on the chest being isolated anteriorly by means of a narrow transverse band which separates them from the white of the chin.

In the menagerie of the Zoological Society are a pair of beautiful chevrotains, regarded by Mr. Gray as distinct from any of the preceding species; he has termed this species *moschus Stanleyanus*, and observes that it is immediately distinguishable from all the other species by the brightness of its colouring, by the absence of a dark mark along the back of the neck, and by the pure white of the under surface of the body. This interesting pair are remarkable for their gentleness and confidence; they suffer the near approach of strangers without manifesting any alarm, and return the gaze of admiring visitors with a serene expression in their full dark eyes. Their movements are light and graceful, and their slender limbs, by no means so thick as a common pencil, are vigorous and elastic. They are evidently more formed for bounding and leaping than for a rapid course. Within the last few months this pair have produced a fawn, a circumstance which proves how easily they become reconciled to captivity, and how well, under a proper system of management, they endure our changeable and northern climate.

The chevrotains have been till lately but very imperfectly understood. Buffon regarded the guevei, or pigmy antelope of Senegal (*antilope pygmæa*), as a chevrotain; and the *moschus Americanus*, and the *moschus delicatulus* of South America, are the young of a species of deer, probably the *cervus nemorivagus*, or *guaza-bira* of Azara. The chevrotains, however, are exclusively oriental, and, in fact, exclusively Indian. Of all the deer tribe, the *muntjacs* of India and the Indian islands approach them the nearest in form and

habits; but these elegant animals have small horns, supported on long osseous peduncles rising from the forehead and covered with hair, a circumstance which, independently of their greater size, easily distinguishes them from the lightest, smallest, and most delicately beautiful of all the Ruminants, the chevrotains.

MAPLE SUGAR-MAKING.

[From a Correspondent.]

THERE is inserted in a previous Number (194) of the 'Penny Magazine,' the process of maple sugar-making, copied from 'Evans's Emigrants' Directory;' but as the process he gives, although pretty general—particularly in Canada, is about the "rudest and the roughest,"—I will proceed to state the manner of manufacturing this article, where it is conducted on a more business-like and extensive scale; for in all the "Tours" and "Directories" connected with North America, I do not remember to have seen the slightest notice taken of those more respectable "maple-sugar factories."

The beautiful maple-tree given in the engraving on the front page of the Number of the 'Penny Magazine' before alluded to, represents that tree when growing in the "cleared" or open ground, where it has an opportunity of stretching out its full-leaved branches in every direction; but it is by no means a faithful representation of the sugar-maple as found in the aboriginal forests of North America. There, encroached upon on every side, it shoots up tall and straight; and often, in a full-grown tree, without branch or limb to the height of fifty or sixty feet: for even the proud oak, that delights to extend its stout arms towards every point of the horizon, is compelled to rear its "diminished head" on the top of a tall, smooth, and branchless stem, straight as the Indian's arrow! Indeed where the forest trees grow so close together as they generally do in those latitudes where the sugar-maple most abounds, there scarcely exists a crooked stem unless it has been compelled to deviate from a perpendicular line by some intervening obstruction. The extracting of sugar from the sap of the maple was not a discovery of the early settlers of those regions; for indolent and incurious as the North American Indians are known to be, it seems that some of their tribes were in the practice of manufacturing this sort of sugar. Rude as was the method they adopted, however, it is almost precisely the same as that mentioned in 'Evans's Emigrants' Directory,' since the only difference seems to be—that the Indians boiled down the sap in earthen vessels, while the modern makers use iron ones.

In those parts of the country where a few of the inhabitants are in the habit of making maple sugar on a larger scale than ordinary, (for generally speaking but few of them make a sufficiency for family consumption) the plan usually adopted is somewhat dissimilar from the common method; and although more labour and expense are necessary to carry it into effect in the first instance, yet ultimately the manufacturer is sure to be well rewarded for his pains. As a description of one set of "sugar-works" will apply to all the others, I will proceed to give a short account of those belonging to a farmer, an acquaintance of mine, residing in Pennsylvania.

The lands in general, where the sugar-maple is abundant, are of an uneven surface, being the descending ridges from some range of mountains, or from elevated table-land; with the exception, however, of a considerable portion of Upper Canada, and some parts of the States of Ohio and Michigan not remote from the large lakes, where the lands are generally level and very little broken. Near the upper extremity of a gently-sloping valley, where the forest abounds with maple trees of a good size, the person

alluded to has fixed his "sugar-camp;" and in the centre of the camp, towards which the ground gradually descends in three different directions, he has fixed upon a place for his "sugar works." These consist of a tolerably spacious shed, built of rude logs, and open towards the south, but closed at the two ends and on the opposite side. Along the centre of the shed is a low rude stone-wall, with a flue along the middle of it, and open spaces for two or three fires, above which are placed three spacious but shallow iron pans, similar to those used in salt-works, where a quick evaporation materially expedites the process of salt-making, the same principle applying equally to the manufacturing of sugar. There are also a couple of middling-sized iron kettles into which the sap, when it has been reduced to the consistency of sirup, is consigned from the flat pans; and here it is boiled slowly and carefully—being frequently stirred, until it crystallizes and becomes sugar. Adjoining the pans is a "receiver," in the form of a large vat, of a clumsy construction, with wooden hoops, and staves of at least three inches in thickness, and containing 800 or 900 gallons. In ordinary cases a large tree hollowed out is used for a receiver. This vessel is sunk a little below the surface of the ground; and a few inches from its bottom there is inserted a hollow wooden tube of about two inches in diameter, which is carried under the foundation of the shed within a drain of two feet in depth. At a short distance from the shed this conducting pipe is connected with four or five others, from which it receives the sap from all the surrounding eminences. The most laborious part of sugar-making, even where it is carried on but to a small extent, is the carrying of the sap to the boiling department, which necessarily must be placed at a considerable distance from some of the trees in the more distant parts of the "sugar bush;" for the quantity of sap required for each pound of sugar is at the least from four to five gallons. The owner of those sugar-works at present under consideration, in order to lessen this part of the labour has had several drains cut along the sides of the sloping declivities; and in the bottom of each drain he has had a wooden pipe placed, at a sufficient depth to be out of the reach of the intensest frosts. At convenient distances he has fixed upright hollow pieces of timber, the top of each shaped like a funnel, into which the collectors of the sap empty their pails and buckets, the contents of which, in a few minutes, is safely conveyed into the receiver, placed within the shed. It is absolutely necessary that the pipes should be placed below the action of the frost, else, during the winter, many of them would be split, and rendered totally unserviceable. Nor would it answer to place them temporarily on the surface; since it commonly happens, during the earlier part of the "sugar-season," that the frost by night (and sometimes by day also) is so severe, that the sap would become frozen in the pipes, on its way to the boiling-shed, whereby the passage would continue obstructed for some time after the sap again began to flow from the trees. In this person's establishment about 2000 trees were tapped annually; and six active persons were in constant attendance at the sugar-works, relieving each other during the night in attending to the supplying of the boilers with sap, and the fires with fuel, so that the evaporation might not be impeded. None of those backwoods' manufacturers, however, carry out the process to the extent of "clarifying and refining;" for all they do towards the obtaining of sugar of a tolerable quality is a due care and attention to cleanliness in every department of the business. In the first place, all their sap-buckets (for they do not use the common woodman's trough) are ascertained to be perfectly sweet and clean; and before the pipes that conduct the

sap to the receiver are put in requisition, a quantity of lime-water is passed through them, which, after remaining for some time in the vat, is pumped out into the boilers: and thus all the vessels employed are rendered free from any taints or impurities.

The sap or liquor in the large pans is passed from one to another as it acquires a certain degree of sweetness; and in each removal it is passed through strainers of the proper degree of fineness. It is then left to subside, previous to its being placed in the sugaring-kettles; and while in this last stage of the process, the accumulating impurities are frequently skimmed off, as they had also been during the earlier stages of boiling. Each of the sugaring-kettles will contain something over two hundred weight, and it occasionally happens that each of them will turn out that quantity per day. A slow fire and frequent stirrings are necessary in this last stage of the operation, in order to prevent the sugar becoming "scorched," or "burnt." Sometimes a little isinglass, or a few quarts of skim-milk, is mixed with the liquor in the boilers; but if the leaves and ashes, and other impurities, have been carefully guarded against, the sugar seldom fails of being a tolerably good colour,—about a medium quality of what we import from the West Indies.

I was given to understand, that, when the season for sugar-making was favourable, the 2000 trees would yield nearly three tons of sugar, or about three pounds and a half each tree; but in indifferent seasons only from 4000 to 5000 lbs. used generally to be made. Some seasons the sap will commence flowing early in March, and at other times not before the early part of April. When the season opens early, it is almost sure to be interrupted by the return of severe frost and snow; and thus it sometimes happens that the business of sugar-making is suspended for several weeks. About three weeks is a full average of "sugar weather;" some years there is a little more, but more frequently less. Supposing the sugar-works of which I have been speaking to yield annually 5400 lbs. weight, the value thereof, taking the average of the last ten years, would be 90*l.* per annum, at the rate of 4*d.* the lb. It may be true that it would not fetch that sum, *in cash*, at the sugar-works, because cash is scarce in that part of the country; but it would pay the manufacturer, over and above the estimated sum it costs to manufacture it, a fair remuneration for the trouble of taking it to market. The expense of the first establishing of these works was about 150*l.*, which, at six per cent. for interest, and ten per cent. for "wear and tear," would amount to 24*l.*; and the wages of six persons for three weeks would be 20*l.*; besides, there would be a consumption of fire-wood to the value of 4*l.* or 5*l.*,—amounting altogether to nearly 50*l.*; leaving a clear profit to the manufacturer of full 40*l.* Although this is but a small sum, yet to a back-woods' farmer, who possesses but few opportunities of realizing *cash*, it becomes worthy of his consideration.

The best customers for maple-sugar are found amongst those persons most violently opposed to slavery; for many of them will give a higher price for an inferior article provided it has been manufactured by *free men*. Although much has been said in favour of maple-sugar, it is a well-known fact to those who have taken the pains to experiment upon it, that it contains less of the saccharine principle than the cane-sugar does by nearly ten per cent.

The best method of tapping the trees is not by "notching" them with an axe, according to the original rude custom, but by boring auger-holes of about an inch in diameter, and to the depth of an inch beneath the inner bark. This method does not at all injure the tree, whereas the notching system often dissevers the bark longitudinally for the space of six or eight inches;

for if the sugar-maker will but take the trouble, when the sap has stopped running, to plug up the auger holes, in two years a new bark will have closed over the small orifices. Some of the modern settlers are getting into the way of planting out groves of young maple-trees; so that when those in the forest shall become old and sapless, they may then have a supply of young and thrifty ones.

CORFE CASTLE.

THE Dorsetshire coast, at its eastern extremity, is indented by a bay which forms the safe and capacious harbour of Poole. The entrance is only about a quarter of a mile in width; a neck of land from the isle of Purbeck, called South Haven Point, and one from the mainland of Dorsetshire, called North Haven Point, projecting into the sea within this distance of each other. The isle of Purbeck is, properly speaking, a peninsula, and forms part of the county of Dorsetshire; is of an irregular form, approaching to an oval, and twelve miles in length; and being indented by several bays, it varies from seven to ten miles in breadth. The surface is agreeably diversified, and the quarries, shores, and cliffs present many objects of interest to the naturalist. The district was once covered with forests, well stocked with deer; and down to the time of James I. was not unfrequently visited by various of our kings for the purpose of enjoying the pleasures of the chase. But the hunting-seats with which it was once studded are now converted into farm-houses. There is, however, another species of industry besides that of agriculture which affords employment to the inhabitants. There are extensive quarries of stone of various kinds, some of which are used for tiling and others for building purposes; and grey marble is also obtained. The working of the quarries and the exportation of the material to London employs a considerable number of persons, and though it is not adapted to magnificent edifices like the Portland stone, it is very extensively used. After the fire of London, the Purbeck quarries supplied a portion of the materials for rebuilding the city. There is a tram-road, or railway, from near Corfe Castle to Poole harbour, to facilitate the conveyance of the stone from the quarry to the place of shipment.

The isle of Purbeck is divided into nine parishes, and several hamlets and villages. Corfe Castle is the only market-town. Previous to the passing of the act to amend the representation of the people in England and Wales, this place had returned two members to Parliament since the early part of the reign of Elizabeth. The constituency consisted of about fourteen resident, and thirty non-resident holders of burgage tenements, and the mayor was the returning officer. It was an ancient borough by prescription, and was incorporated by Queen Elizabeth. The government was vested in the mayor and eight burgesses, who, after they had passed the mayor's chair, were called "barons." When the borough was visited under the Commission of Corporation Inquiry, the corporate body refused to give any information respecting their charters and privileges; and from the nature and constitution of this body, and the situation in life of the inhabitants, no particulars on these points could be obtained by the commissioner. In his report it is stated that "the town of Corfe Castle is of mean appearance, and presents no indication of present prosperity, or of progressive improvement. The census of 1831 shows that although there were at that time no uninhabited houses in the borough, there were also none that were in a course of building; that the number of inhabited houses was 156, the number of families occupying them 193, and the total population 960." The privilege of returning two members to Parliament, while towns containing



[Corfe Castle, Dorsetshire.]

200,000 inhabitants were denied this power of electing representatives being inconsistent and incompatible with the times, Corfe Castle was disfranchised under the Reform Act; and being destitute of the proper elements of self-government, its corporate character also is no longer recognised.

The castle is on the north side of the town, on a steep eminence, and a bridge of four high and narrow arches, which is thrown across a deep moat, now dry, connects it with the town. Edward the Martyr was stabbed at the gate of this castle, by order of his mother-in-law, who, with her son, then inhabited it. It has been a place of considerable strength, and from its position on the southern coast, was doubtless regarded as of great importance to the protection of the kingdom. The castle was most probably the precursor of the town.

AGRICULTURE, GARDENING, &c. OF CHINA.

[Continued from No. 298.]

THERE is nothing perhaps more peculiar in the horticulture of the Chinese than their boat or raft-gardening. On the immense lakes, swamps, rivers, and canals, with which many parts of the empire abound, a very numerous population live entirely on the water, and gain their living mainly by fishing. To correct the acrid and unwholesome humours that a fish diet is apt to generate,

they eat an immense quantity of garlic and onions, of which the Chinese universally are very fond; and these they cultivate even on the bosom of the waters over which they are constantly roving. The poor fishermen having positively no houses on shore, nor fixed abode, and consequently no inducement to cultivate patches of land, which their more important pursuits of fishing might require them to leave, they have invented a system of culture which may move with them, and they thus transport their gardens wherever they may go. This they do by constructing rafts of the ever-useful bamboo, which are well interwoven with weeds and strong grass, and then launched on the water and covered with earth. These floating gardens are made fast to the stern of their junks and boats, and towed after them*.

The imperial parks and pleasure-grounds of the Chinese, and what we call landscape-gardening, have always been spoken of in high terms of wonder and

* According to Purchas, there was a curious coincidence between the Mexicans and the Chinese in the use of floating gardens. Their construction seems to have been much on the same principle. "But, in truth," says the quaint old writer, describing the rafts that were used on the Mexican lake, "it is a matter to be done, and there hath been often scene of these gardens floating in the water; for they cast earth upon reeds and grasse, in such sort as it never wastes in the water; they sow and plant this ground, so as the graine grows and ripens very well, and then they remove it from place to place."—Purchas, his 'Pilgrimes,' lib. v., chap. 4.

admiration, and seem indeed to be more deserving of praise than their agriculture.

Marco Polo dwells with emphasis on the vast park of Kin-sai, where 500 apartments of the palace had each its respective garden of flowers and of shrubs; and where two divisions of the inclosure which was ten miles in circumference, were laid out in groves, pieces of water, beautiful gardens stored with fruit-trees, and preserves of all sorts of animals that are the object of sport. Magnificent as this description of the old Venetian may sound, it is almost borne out in fact by modern accounts of the emperor's great park at Gehol. We are fortunate in possessing a description of the last-mentioned place by one who had seen it at his leisure—by Lord Macartney, who was not only a man of indisputable veracity and judgment, but a man of fine feeling and taste, and himself particularly skilful in the art of landscape-gardening.

“The emperor,” says his lordship, “having been informed that in the course of our travels in China we had shown a strong desire of seeing everything curious and interesting, was pleased to give directions to his first minister to show us his park, or garden at Gehol. It is called in Chinese *Yan-shoo-yuen*, or paradise of 10,000 (or innumerable) trees. In order to have this gratification (which is considered as an instance of uncommon favour) we arose in the morning at three o'clock, and went to the palace, where we waited, mixed with all the great officers of state, for three hours (such is the etiquette of the place) till the emperor's appearance. At last he came forth, borne in the usual manner by sixteen persons on a high, open palanquin, attended by guards, music, standards, and umbrellas without number, and observing us, as we stood in the front-line, graciously beckoned us to approach, having ordered his people to stop; he entered into conversation with us, and with great affability of manner, told us that he was on his way to the pagoda, where he usually paid his morning devotions; that as we professed a different religion from his, he would not ask us to accompany him, but that he had ordered his first minister, and chief eunuchs, to conduct us through his garden, and to show us whatever we were desirous of seeing there.

“Having expressed my sense of this mark of his condescension in the proper manner, and my increasing admiration of everything I had yet observed at Gehol, I retired; and whilst he proceeded to his adorations at the pagoda, I accompanied the ministers and other great eunuchs of the court to a pavilion prepared for us, from whence, after a short collation, we set out on horseback to view this wonderful garden. We rode about three miles through a very beautiful park, kept in the highest order, and much resembling the approach to Luton, in Bedfordshire; the grounds gently undulated, and chequered with various groups of well-contrasted trees in the offskip. As we moved onward an extensive lake appeared before us, the extremities of which seemed to lose themselves in distance and obscurity. Here was a large and magnificent yacht ready to receive us, and a number of smaller ones for the attendants, elegantly fitted up, and adorned with numberless vanes, pendants, and streamers. The shores of the lake have all the varieties of shape which the fancy of a painter can delineate, and are so indented with bays, or broken with projections, that almost every stroke of the oar brought a new and unexpected object to our view. Nor are islands wanting, but they are situated only where they should be, each in its proper place, and having its proper character; one marked by a pagoda, or other building; one quite destitute of ornament; some smooth and level; some steep and uneven; and others frowning with wood, or smiling with culture. Where any things particularly interest-

ing were to be seen we disembarked, from time to time, to visit them; and I dare say that, in the course of our voyage, we stopped at forty or fifty different palaces or pavilions. These are all furnished in the richest manner with pictures of the emperor's huntings and progresses; with stupendous vases of jasper and agate; with the finest porcelain and japan; and with every kind of European toys and *sing-songs*;—with spheres, orreries, clocks, and musical automatons, of such exquisite workmanship, and in such profusion, that our presents must shrink from the comparison, and “hide their diminished heads!” And yet I am told, that the fine things we have seen are far exceeded by others of the same kind in the apartments of the ladies, and in the European repository at *Yuen-min-yuen*. In every one of the pavilions was a throne, or imperial state; and a *Eu-jou*, or symbol of peace and prosperity, placed at one side of it, resembling that which the emperor delivered to me yesterday for the king.

“It would be an endless task were I to attempt a detail of all the wonders of this charming place. There is no beauty of distribution, no feature of amenity, no reach of fancy, which embellishes our pleasure-grounds in England, that is not to be found here. Had China been accessible to Mr. Brown or Mr. Hamilton*, I should have sworn they had drawn their happiest ideas from the rich sources which I have tasted this day; for in the course of a few hours I have enjoyed such vicissitudes of rural delight, as I did not conceive could be felt out of England, being at different moments enchanted by scenes perfectly similar to those I had known there, to the magnificence of Stowe, the softer beauties of Wooburn, and the fairy-land of Paine's Hill.

“One thing I was particularly struck with—I mean the happy choice of situation for ornamental buildings. From attention to this circumstance they have not the air of being crowded or disproportioned; they never intrude upon the eye; but wherever they appear, always show themselves to advantage, and aid, improve, and enliven the prospect.

“In many places the lake is overspread by the lotus (nelumbium) resembling our broad-leaved water-lily. Artificial rocks and ponds with gold and silver fish, are perhaps too often introduced, and the monstrous porcelain figures of lions and tygers, usually placed before the pavilions, are displeasing to an European eye; but these are trifles of no great moment; and I am astonished that now, after a six hours' critical survey of these gardens, I can scarcely recollect anything besides to find fault with.”

[To be continued.]

Nine of Diamonds, the Curse of Scotland.—In playing cards the nine of diamonds is commonly nick-named “the Curse of Scotland,” and several reasons have been assigned for this strange denomination. When the Duke of York, who was shortly after James II., took up his residence at Edinburgh, and enlarged the palace of Holyrood, he and his court introduced a new game there called Comet, in which the nine of diamonds was the most important card. The Scots, who had to learn the game, lost tremendous sums at it, and from that circumstance the nine of diamonds was called the Curse of Scotland. Another derivation is that the nine of diamonds bore some resemblance to the arms of the Dalrymples, and that Lord Stair, a member of that family, was the real Curse of Scotland. But a third derivation is more modern, and much more striking, though we cannot take upon ourselves to decide that it is the most correct or the right one. It is said that the night before the fatal battle of Culloden, the Duke of Cumberland sent orders to General Campbell to give no quarter to the soldiers of the Pretender,—that this order being dispatched in great haste, happened to be written on a card, and that card the nine of diamonds; from which time and circumstance it has gone by the appellation of the Curse of Scotland.

* Two celebrated landscape-gardeners of the last century, who laid out several of the most beautiful grounds in England.

CULTIVATION OF POPULAR TASTE.

WHEN a people have secured to themselves a position in which the efforts of regular industry, accompanied by prudence, do not fail to obtain the means of satisfying the bodily wants, the next step is, to attempt to elevate the mind by enlarging the sphere of its activity; for if the mental powers are directed too exclusively to one object, and that not of a nature to call forth the higher qualities of the mind, the danger is, that in spite of the people being placed above the physical necessities to which savage life is incident, they will nevertheless display many characteristics which are the criterion of an inferior state of society. Though men in all classes are more or less engaged in providing the means of subsistence, there is no reason why they should not be taught to aspire to other objects, and made to participate in those gratifications of an intellectual order, the enjoyment of which not only does not incapacitate them from performing the ordinary duties of life, but renders the path of duty more cheerful and pleasant. As regards the mass of the people, the quick and refined sense of the perceptive powers may be deadened; but as their pursuits, though incapable in themselves of exercising much elevating influence, have no debasing tendency, it will not be difficult to awaken their slumbering powers, and to spread out before them a new world full of everything which can administer to pure and intellectual gratification. This is an object which is happily occupying the attention of many superior minds actuated by the most genuine feelings of philanthropy, and guided by the soundest views of human nature. Down to a comparatively recent period knowledge was the possession of a very small fraction of the people; but the present times are distinguished by a desire to bring it within the reach of all. This seems peculiarly desirable in a country like England, in which civil duties are undertaken by so large a number of persons for political or national purposes, and for the management of provincial affairs; and it is called for by the necessities arising out of a very complicated state of society, which demand from each individual a great share of prudence, in order to avoid the consequences of miscalculating the influence of surrounding circumstances. In some parts of Germany a man may not marry until he is about twenty-five years of age, but the general diffusion of education would seem to render such a restriction unnecessary there, while in England, with fewer means of instruction, there is, and very properly too, no restriction of the same kind; but individuals often suffer from their inability to form an instructed view of their position. The progress which knowledge is making has, there can be little doubt, tended to prevent misery arising from this source.

By affording greater play to the perceptive and reflective faculties, and rendering the moral sentiments more active, there is great probability that the inferior propensities will be confined within stricter limits. The badly-regulated exercise of the latter are the most frequent causes of the misery and wretchedness which prevail amongst all classes; and by diminishing the action of these passions the happiness of society will be increased. By diffusing a love of nature and of art amongst the people, the higher faculties of the mind will be awakened, and the impulses under which men seek for excitement in vicious indulgences, will be more easily overcome. But well-directed efforts can alone effect this improvement. The occupations which multitudes follow do not bring them in contact with objects calculated to arouse in them an admiration of beauty and grandeur. The Scottish shepherd who watches amid the solitary hills is more likely to be

imbued with a deeper love of nature than the worker in a factory, or than an uneducated agricultural labourer.

“The outward show of sky and earth,
Of hill and valley he has viewed;
And impulses of deeper birth
Have come to him in solitude.”

But the reason is that he has also been better educated, or the grandest and fairest scenery might have been presented to his eye without exciting an emotion. The peculiar direction of labour in this country, where it operates in large masses, in factories and workshops, is far from being unfavourable to the development of the mental faculties, if once they are roused and directed into their proper course, and rendered sufficiently observant. “Though,” says Adam Smith, “in a rude state of society there is a good deal of variety in the occupations of every individual, there is not a great deal in those of the whole society. Every man does, or is capable of doing, almost everything which every other man does or is capable of doing. Every man has a considerable degree of knowledge, ingenuity, and invention, but scarce any man has a great degree. The degree, however, which is commonly possessed, is generally sufficient for conducting the whole simple business of society. In a civilized state, on the contrary, though there is little variety in the occupations of the greater part of individuals, there is an almost infinite variety in those of the whole community. The contemplation of so great a variety of objects necessarily exercises their minds in endless comparisons and combinations, and renders their understandings in an extraordinary degree both acute and comprehensive.”

The difference between an active and sluggish state of mind may be illustrated by an example with which every one will be familiar. A road which presents an unvaried line is much more fatiguing to the traveller than one which, by frequent windings, presents a succession of agreeable objects. In the one the mind is deadened, and in the other as agreeably excited and led into trains of thought. So it may be with the daily life of individuals: if the perceptive faculties have been duly trained, subjects of observation will incessantly arise, each conveying instruction in some form or degree; but if these powers of the mind have been neglected, the way will be proportionably wearisome; and in the absence of pure and innocent enjoyments, excitement will be sought in those of an opposite character. Individuals who have been born blind, and afterwards obtained the use of their sight, are at first incapable of marking the difference between objects; and when portraits have been exhibited to savages, being unable to conceive that they were only representations of living beings, they have addressed them as animated objects. So the mind requires to be initiated into the processes which enable it to comprehend the spirit of external objects. Without these preparatives, no objects but those which are marked by some broad distinctive character make any impression. Hundreds of objects which indicate order, regularity, and contrivance, are passed without being noticed; and the finer and more spiritual meaning of others cannot be read. While a yew-tree clipped into some incongruous form excites attention by its harsh contrast, the beauty of the autumnal woods, the blending of their tints, and the associations which arise from the contemplation of fading Nature, excite no appropriate feelings. A superior enjoyment, and a means of moral instruction and improvement, are positively lost owing to the mind not having been properly trained.

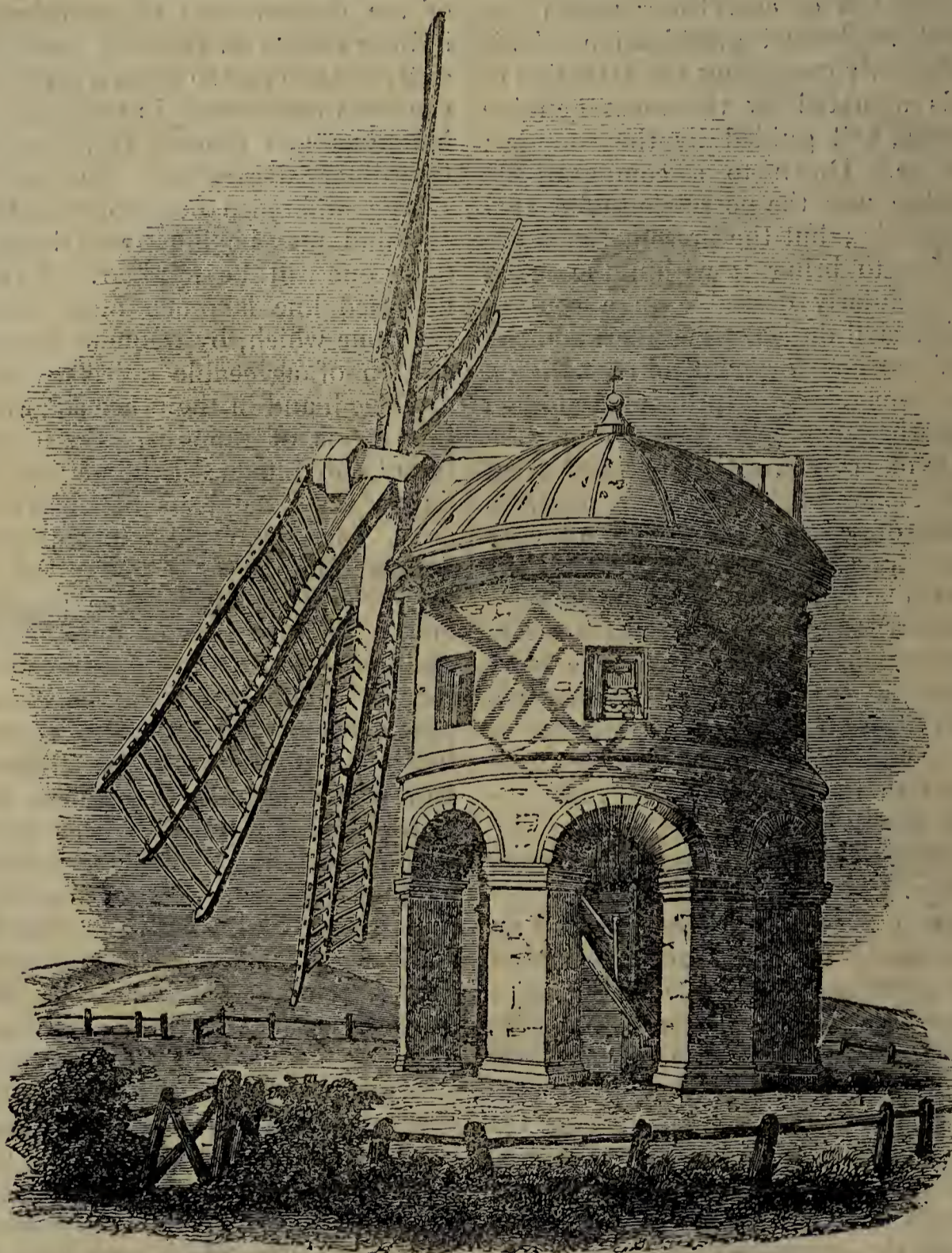
The mind may be imperceptibly educated, and taught, in a variety of ways, to appreciate true beauty, whether in just proportion or harmonious colouring, or fitness

and propriety, if the habit of observation be once created. Let a man who walks in the dockyards observe the cranes which are employed in loading and unloading ships; though of great power and strength of material, they are made to appear light and elegant by the graceful forms which are given to them: or let him observe the manner in which iron-bars for the security of a window may be made completely repulsive or ornamental; while those in front of a prison look grim, and speak of the wretchedness pent within, they are deprived of their unsightly appearance by being made to assume a different form.

Various manufactures might be made instrumental in improving the popular taste. Common earthenware might be moulded into the most exquisite forms; and in place of the vulgar and meretricious ornaments with which it is often disfigured, the designs might be models of taste and elegance. Articles in common use, thus designed and embellished, and constantly before the eye, could not but tend to improve the taste of the people; and the effects would quickly display themselves in a hundred various modes. It is to be regretted that, owing to the public taste being so little advanced, buildings for chapels, schools, and other purposes, have been erected in every part of the country, completely destitute of the slightest pretensions to

architectural beauty,—inappropriate in their appearance, and mean in character. These buildings might just as well have been made agreeable objects, uniting convenience and propriety with something of beauty and elegance of design. The Infant School at Holloway* is an instance of what would commonly be done if the public taste were improved; and the taste with which a boat-house in a nobleman's park is often constructed might be applied in the erection of the humblest cottage. Many of the cottages erected on the great roads of the kingdom as residences for the toll-collectors are models of elegance in cottage-architecture, and offer examples of improvement which it is to be hoped will be frequently followed. The Windmill at Chesterton, Warwickshire, represented in the cut, is a striking instance of the application of superior art to what is considered a common-place object, but which is transformed by art into an object of interest. It is said to have been erected from a design by Inigo Jones; and no one will deem that his great talents were misapplied in conferring upon such a structure a character of fitness and propriety, resembling in effect, though not in kind, the greater works which are regarded among the triumphs of the art.

* Companion to the British Almanac for 1837.



[Windmill at Chesterton, Warwickshire.]

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CORN-MARKET, PARIS.



[Halle aux Blés et Farines.]

THE Halle aux Blés is situated in the centre of Paris, in a circular space which was formerly the site of the Hôtel de Soissons, built for Catherine de' Medicis, in 1572. Six streets, leading to different quarters of the capital, issue from this central point. The last possessor of the Hôtel de Soissons was the Prince de Carignan of Savoy, who died in 1741 in embarrassed circumstances. His creditors seized his property, including his hôtel, which they obtained leave to demolish with a view of selling the materials. The site was purchased by the municipal body of Paris, and it was determined, in 1763, to erect on the vacant place an

edifice calculated to serve as a dépôt for grain and flour, the old Halle aux Blés not affording the convenience and accommodation demanded by the increasing population. In 1772 the building was completed. It was of a circular form, having vaults beneath, and galleries in the upper part, the internal space being uncovered. In 1782 the design of forming a rotunda, capable of containing a larger quantity of produce, was carried into effect by surmounting the circular walls with a cupola. On the internal walls were placed medallions of Louis XVI., of Lenoir, one of the chief police authorities, and of Delorme, the architect by

whom an ingenious plan, which had not been practised since the sixteenth century, was again applied in the construction of the cupola. During the Revolution of 1789, the medallions of Louis XVI. and Lenoir were destroyed, but that of Delorme escaped the excesses of those times. In 1802 the cupola was entirely destroyed by fire, through the carelessness of a plumber, and the damage was not repaired before 1812. It is now formed of ribs of iron, covered with copper, and the building is therefore fire-proof. The diameter is 136 feet, being only 14 feet less than the cupola which surmounts the Pantheon at Rome. The circumference is 410 feet, and the height 107 feet. The light is admitted by a lantern, 33 feet in diameter, placed at the summit. The 'Paris Guide,' by Galignani, contains some minute particulars respecting the construction of the cupola. It is composed of 51 curves, rising in a vertical direction from the cornice to the great circular window; which are supported in the whole circumference by 15 other curves, forming 765 compartments, the size of which progressively diminishes towards the top.

The column which is seen in the engraving is the only remnant left of the Hôtel de Soissons; and it would have been destroyed when the hôtel was demolished, had it not been for the zeal of a private individual, who purchased it, on condition that it should be allowed to remain. He presented it to the municipal body; but, humiliated by the reflection that they should have shown less zeal for the preservation of an interesting monument than an individual citizen, they repaid him the sum which he had advanced. It was then resolved that the column should be removed to the centre of the projected court, which, in the original state of the Halle aux Blés, was not covered in, and some steps had been taken to effect this object when the design was abandoned, and it is now attached to the exterior wall. The capital is of the Tuscan order, but the base belongs rather to the Doric style. The height of the column is 103 feet, comprising the iron-work at the top, which is intended as a lightning-conductor. A sun-dial of very ingenious construction is placed at the upper part of the column, and at the base there is a fountain. The diameter of the base is 10 feet, and the interior of the column contains a staircase. The mis-called science of astrology was in repute when Catherine de' Medicis erected this column, from the summit of which attempts were vainly made to read the future. Bas-reliefs, representing trophies and crowns, fleurs-de-lis, the letters C and H interwoven, being the initials of Catherine and her husband, Henry II., broken mirrors, and other emblems of widowhood, are sculptured in various places.

The Halle aux Blés is open every day for the sale of grain, seeds, and flour; but the principal market-days are Wednesday and Saturday. While it forms a considerable dépôt, and is the centre of commercial transactions in grain, the Grenier de Réserve ou d'Abondance is on a much larger scale, and will contain sufficient corn for the consumption of the capital for two months. In this storehouse the bakers are compelled constantly to keep 25,000 sacks of flour, besides 78,000 at their bakehouses. These *greniers*, or warehouses; are near the Garden of Plants, and were commenced in 1807. They were intended to have been on a vast scale, comprising mills for grinding flour, but the political events of 1814 occasioned an alteration in the original plan. In 1833 the number of bakers in Paris was 600, and as the quantity of sacks of flour required to be kept in store is 103,000, each baker must have about 170 sacks on his hands, worth on an average from 25s. to 30s. per sack. This arrangement cannot but operate with great hardship, not only by locking up capital to the amount of 130,000*l.* or

150,000*l.*, but by placing the bakers too much in the hands of the corn-dealers, and also by affecting the price of bread. When the markets are rising, they cannot resort to their stock in the warehouses without running the risk of having to replace it at, perhaps, a considerable sacrifice; whereas, by consuming their stock on hand, and keeping out of the market for a time, the price of corn would come down. An artificial demand is created, the effect of which is to raise prices in an unnatural manner. Private speculation effects by more economical means those arrangements which the executive power cannot undertake without oppressing private interests. The notion of providing for the prospective consumption of Paris indicates a want of confidence in the ever-active agency of personal interests, operating in commercial transactions, which possibly will be soon regarded as of little importance now that the nature of trade is more generally and better understood by the French people. If a scarcity be apprehended in any particular quarter, prices rise as a matter of course, and hundreds of individuals avail themselves of the opportunities which are best known to themselves; and by purchasing wherever the commodity is in the greatest plenty and the cheapest, the scarcity is obviated and prices are equalized; or, if there be a real deficiency in the supply, the same vigilance prevents its being felt more severely in one place than in another.

The annual consumption of bread in Paris is 397,272,972*lbs.*, of the value of 2,052,400*l.* The consumption of flour in pastry and various other ways is 37,145,732*lbs.*, of the value of 220,800*l.*; making the total consumption amount in value to 2,273,200*l.*, and in quantity to 434,000,000*lbs.**. If the annual expenses of each inhabitant of Paris be divided into 100 parts, nineteen of them, or nearly one-fifth, are occasioned by the consumption of bread, twenty-two parts by the consumption of meat, and twenty-seven in wine and spirits. Each individual uses a greater quantity of bread in Paris than in London, and in the former capital the working classes may often be seen dining on bread and fruit, or with the addition of a small quantity of cheese, while in this country there are few individuals of the same class who do not take animal food at their principal meal. It is fortunate that the price of bread in Paris is usually low. The price is fixed by the police every fortnight, in the same manner that the assize of bread was formerly taken periodically in London; and it is generally 60 per cent. cheaper in Paris than in London, and of as good quality.

It is stated in Dr. Bowring's 'Report on the Commercial Relations between France and Great Britain,' that from the 1st of July, 1825, the order of police fixing the price of bread has been based on the price of corn and of flour, as given in the market rates which are published between the dates of each order. For the three years ending in 1827, which include 1095 days, the price of the white loaf of two kilogrammes† was 57.50 centimes‡ during 411 days, and for 381 days it was at 60 centimes. If the period of 1095 days be divided into 100 parts, the number of days at which the price was

Centimes.	Out of 100 Days.	Centimes.	Out of 100 Days.
55	is 3.9	67.50	is 1.4
57.50	„ 37.5	70	„ 1.5
60	„ 34.8	72.50	„ 1.5
61.50	„ 4.2	77.50	„ 1.4
62.50	„ 5.6	80	„ 1.4
65	„ 4.	82.50	„ 2.8

* These estimates, taken from Dr. Bowring's 'Report,' cannot be considered as perfectly correct, so far as the actual consumption of the inhabitants of Paris is concerned. The price of bread is sometimes cheaper in Paris than in the surrounding district, the consequence of which is a considerable external demand.

† A kilogramme is equal to 2*lb.* 3¼*oz.* English.

‡ A centime is rather less than the tenth part of a penny, being the one-hundredth part of a franc.

The annual expenditure of each inhabitant of Paris in bread, and in articles wherein flour is used, being 2*l.* 12*s.*, an inhabitant of London, if an equal quantity were consumed, would pay 4*l.* 3*s.* a-year; but probably it would not be inaccurate to assume that the quantity consumed in London is 30 per cent. less for each individual, so that the annual expenditure per head will be 3*l.* 7*s.*

The important influence of large towns upon the progress of agriculture is great and striking. "In the neighbourhood of trading towns (says Dr. Paley), and in those districts which carry on a communication with the markets of trading towns, the husbandmen are busy and skilful, the peasantry laborious; the land is managed to the best advantage, and double the quantity of corn or herbage (articles which are ultimately converted into human provision) raised from it, of what the same soil yields in remoter and more neglected parts of the country. Wherever a thriving manufactory finds means to establish itself, a new vegetation springs up around it. I believe it is true that agriculture never arrives at any considerable, much less at its highest, degree of perfection when it is not connected with trade; that is, when the demand for produce is not increased by the consumption of trading cities." Taking the consumption of the metropolis at 1,725,000 quarters of wheat annually, the same number of acres are brought into cultivation in order to obtain this quantity of produce. This would be equal to one-fourteenth part of the arable land in cultivation in England. The number of families required to produce 1,725,000 quarters of wheat, would be about 30,000, or, with those dependent on them, not fewer than 150,000 persons immediately engaged in agricultural labour. English agriculture is considered twice as productive as French agriculture, and therefore the consumption of Paris, which contains half the population of the British metropolis, causes the employment of the same number of agriculturists as London.

Self-riches.—At an inn in Sweden there was the following inscription, in English, on the wall:—"You will find at Trollhätte excellent bread, meat, and wine, *provided you bring them with you*;" and this will almost serve for a description of human life,—so much depends upon the temper that events are met with, and on the prudence that foresees and provides against them.—*Sharp's Letters.*

PROVENDER FOR THE VULTURES.

THE following spirited paper, from the pen of Dr. Johnson, constituted the original No. 22 of the 'Idler;' but on the reprint of that work in volumes, this essay was suppressed by the author, and another substituted in its stead:—

THE IDLER.—No. 22.

Many naturalists are of opinion that the animals which we commonly consider as mute, have the power of imparting their thoughts to one another. That they can express general sensations is very certain; every being that can utter sounds, has a different voice for pleasure and for pain. The hound informs his fellows when he scents his game; the hen calls her chickens to their food by her cluck, and drives them from danger by her scream.

Birds have the greatest variety of notes; they have indeed a variety, which seems almost sufficient to make a speech adequate to the purposes of a life which is regulated by instinct, and can admit little change or improvement. To the cries of birds, curiosity or superstition has always been attentive; many have studied

the language of the feathered tribes, and some have boasted that they understood it.

The most skilful or most confident interpreters of the sylvan dialogues have been commonly found among the philosophers of the East, in a country where the calmness of the air, and the mildness of the seasons, allow the student to pass a great part of the year in groves and bowers. But what may be done in one place by peculiar opportunity, may be performed in another by peculiar diligence. A shepherd of Bohemia has, by long abode in the forests, enabled himself to understand the voice of birds; at least he relates with great confidence a story, of which the credibility is left to be considered by the learned.

"As I was sitting," said he, "within a hollow rock, and watching my sheep that fed in the valley, I heard two vultures interchangeably crying on the summit of the cliff. Both voices were earnest and deliberate. My curiosity prevailed over my care of the flock; I climbed slowly and silently from crag to crag, concealed among the shrubs, till I found a cavity where I might sit and listen without suffering or giving disturbance.

"I soon perceived that my labour would be well repaid, for an old vulture was sitting on a naked prominence with her young about her, whom she was instructing in the arts of a vulture's life, and preparing, by the last lecture, for their final dismissal to the mountains and the skies.

"My children," said the old vulture, "you will the less want my instructions, because you have had my practice before your eyes; you have seen me snatch from the farm the household fowl, you have seen me seize the leveret in the bush, and the kid in the pasture, you know how to fix your talons, and how to balance your flight when you are laden with your prey. But you remember the taste of more delicious food; I have often regaled you with the flesh of man." "Tell us," said the young vultures, "where man may be found, and how he may be known; his flesh is surely the natural food of a vulture. Why have you never brought a man in your talons to the nest?" "He is too bulky," said the mother; "when we find a man we can only tear away his flesh, and leave his bones upon the ground." "Since man is so big," said the young ones, "how do you kill him? You are afraid of the wolf and of the bear; by what power are vultures superior to man? is man more defenceless than a sheep?" "We have not the strength of man," returned the mother, "and I am sometimes in doubt whether we have the subtilty; and the vultures would seldom feed upon his flesh, had not nature, that devoted him to our uses, infused into him a strange ferocity, which I have never observed in any other creature that feeds upon the earth. Two herds of men will often meet and shake the earth with noise, and fill the air with fire. When you hear noise, and see fire, with flashes along the ground, hasten to the place with your swiftest wing, for men are surely destroying one another; you will then find the ground smoking with blood and covered with carcasses, of which many are dismembered and mangled for the convenience of the vulture." "But when men have killed their prey," said the pupil, "why do they not eat it? When the wolf has killed a sheep, he suffers not the vulture to touch it till he is satisfied himself. Is not man another kind of wolf?" "Man," said the mother, "is the only beast who kills that which he does not devour, and this quality makes him so much a benefactor to our species." "If men kill our prey, and lay it in our way," said the young one, "what need shall we have of labouring for it ourselves?" "Because man will sometimes," replied the mother, "remain for a long time quiet in his den. The old vultures will tell you when you are to watch his motions.

When you see men in great numbers moving close together, like a flock of storks, you may conclude that they are hunting, and that you will soon revel in human blood.' 'But still,' said the young one, 'I would gladly know the reason of this mutual slaughter. I could never kill what I could not eat.' 'My child,' said the mother, 'this is a question which I cannot answer, though I am reckoned the most subtle bird of the mountain. When I was young, I used frequently to visit the eyrie of an old vulture, who dwelt upon the Carpathian rocks; he had made many observations; he knew the places that afforded prey round his habitation, as far in every direction as the strongest wing can fly between the rising and setting of the summer sun; he had fed year after year on the entrails of men. His opinion was, that men had only the appearance of animal life, being really vegetables, with a power of motion; and that as the boughs of an oak are dashed together by the storm, that swine may fatten upon the falling acorns, so men are, by some unaccountable power, driven one against another till they lose their motion, that vultures may be fed. Others think they have observed something of contrivance and policy among these mischievous beings; and those that hover more closely round them, pretend that there is, in every herd, one that gives directions to the rest, and seems to be more eminently delighted with a wide carnage. What it is that entitles him to such pre-eminence we know not; he is seldom the biggest or the swiftest, but he shows, by his eagerness and diligence, that he is, more than any of the others, a friend to the vultures.'

IMPROVEMENT OF TASTE IN THE DECORATION OF HOUSES.

A WIDE field for productive employment might be opened, if the taste of the people of Great Britain were so generally improved, as to require that the decoration of houses, and the adaptation of household furniture, should be pursued on scientific principles. Many a young artist of acknowledged taste and ability, whose ambition urges him to struggle with poverty and neglect in trying to attain eminence in a high walk of his profession, might thus acquire an honourable independence in an occupation which would task all the talent and taste he possesses. And not only would it be no ignoble employment, so far as science and skill were concerned, but he might have the farther satisfaction of knowing that the profession which brought him ample means of subsistence, was also ministering to the enjoyment of thousands.

The working classes—those who earn their daily bread by daily toil—may be apt, on the first mention of such a subject, to say, that it is all very well for people to talk who have got money to spend on the decoration of their houses. As for them, they may say, they are obliged to take what they can get. Such an idea is a most serious obstacle to all exertion and all improvement. Why should they be content with what they can get? For instance, the duty on stained paper is now wholly repealed. If rooms are to be papered at all, why should they not be ornamented with tasteful, elegant, and suitable patterns, instead of what is tawdry and ugly? Let us get rid entirely of the idea that the one is necessarily dearer than the other; for if there be a demand, the supply will soon follow, and the demand producing competition in the supply will ensure cheapness.

Mr. Cockerell, the eminent architect, was asked, before the Committee of the House of Commons on Arts and Principles of Design, "Do you consider the ancients dwelt much upon the importance of the con-

nexion between manufactures and arts?" "I should say," he replies, "the evidence of all history, especially Grecian, confirms the fact of their solicitude on that subject. We know that a stranger who established a new manufacture in Athens obtained the rights of a citizen. Athens and Ægina were the greatest manufactories of Greece in all works connected with fine arts; some of the most illustrious philosophers and statesmen were sons of manufacturers, or some way connected with fine arts. The artists of Ægina had more commissions in all parts of Greece than any other nation. The manufacture of bronzes, especially candelabra, is celebrated by Pliny. Herodotus informs us that they had a protecting duty on fictile vases, and there were peculiar laws for the protection of manufactories and the restraining the artists from emigration. Great artists arose from the manufacturing establishments; and again, it is apparent from all their works that those artists who had failed in the higher branches applied themselves to the lower ones; and we have admirable works, of a minute and minor kind comparatively, such as vases and bronzes, armour and medals, which unquestionably are executed by men who have worked upon a much larger scale, and attempted very much higher things."

Mr. D. R. Hay, a house painter of Edinburgh (author of an exceedingly useful book, 'The Laws of Harmonious Colouring, adapted to Interior Decorations,' &c.), was also examined before the same Committee. He was asked, "What do you consider the best line of study for persons intended for a profession like your own, or best adapted to improve the taste of the working class generally?" He answers, "It is, in the first place, to initiate them in the drawing of large symmetrical figures by the hand."

"By symmetrical figures, what do you mean?—Squares, ovals, and circles; they should then practise undulations and volutes. Their attention should then be directed to the vegetable kingdom, and they should begin their practice by studying from large well-developed leaves. All the common weeds, that grow in such profusion by our hedge-rows and road-sides, as also in the wildest and most sterile parts of the country, are worthy of the study and attention of those who wish to improve their taste in regard to what is really elegant or beautiful in form. I consider it a mistaken idea that ornamental designers will be produced by setting young men to copy statues or pieces of sculptured ornament, however good they may be. The vegetable kingdom presents the best examples for study, and I reckon it an equally mistaken idea that the rare productions of the botanical garden are the only models of this kind from the study of which a taste for ornamental design may be derived. Both grace and elegance of form are to be found in the common dock, the thistle, the fern, or even in a stalk of corn or barley. The study of such objects is within the reach of all classes, and those who thus form their taste, when they come to study the ornamental remains of Athens and Rome, will find themselves familiar with the source from which such designs are derived."

Mr. George J. Morant, one of the firm of Morant and Son, house decorators, London, was also examined before the same Committee. He is asked, "Is there not great confusion observed in the several styles in England in decoration, both for furniture and rooms?"—I think very great," he answers, "but the desire to obviate that evil is very much greater than it used to be. Persons now who require rooms fitted up in a particular style, out of the common way, say to me, what they did not use to say, 'But how will it agree with such and such a piece of furniture that I may have? that may not be of the same style;' or they may

make some observation tending to show a desire that all should harmonize.

“Is not the bad taste owing to the want of knowledge of scientific principles with regard to the harmony of colours?—Yes, I think it is owing to that want of knowledge.”

In the following extract from Mr. Hay's book on 'Harmonious Colouring,' there is an account of a young man's commencement in life (it is supposed the person mentioned is Mr. Hay himself), which is most interesting as an example, and peculiarly valuable in connexion with this subject.

“It is seldom that the young men who are admitted to our drawing academies consider their studies as merely intended to improve them in the useful arts to which they may be bred. They almost uniformly imbibe the idea of rising into a higher sphere; and seem to have no other ulterior object in their studies than to leave their humble calling, at the expiry of their indentures, and become artists. I speak from particular facts which have come under my own observation. Many an industrious young man, of mediocre talent, but possessing sufficient to have raised him to the head of ornamental painting, have I known sacrifice himself to a life of penury and neglect from this vain idea.

“I shall here give an original anecdote of the illustrious author of 'Waverley,' which relates directly to this subject. A young aspirant of this kind, during his apprenticeship, had produced some pictures which attracted the notice of this great man, who, with that goodness of heart for which he was so distinguished, took the youth under his particular patronage, and got him admitted to the academy of the honourable the Board of Trustees [for the encouragement of manufactures in Scotland, to whom the book is dedicated]. This young man, at the expiry of his indentures, like most others in similar circumstances, turned his back upon the humble profession of house painting, to which he was bred, and laboured strenuously to gain a livelihood by painting pictures. Whether the penetrating eye of this wonderful man had seen, by the appearance of his *protégé*, the difficulties he was encountering, or by his works, that he had got a long probation to undergo before attaining eminence as an artist, is not known—probably both; but on one occasion, shortly after the expiry of his apprenticeship, when he waited upon his patron with a picture which he had been commissioned to paint, Sir Walter addressed him nearly as follows:—‘I have thought for some time, that were young men who have a genius for painting, and who are not possessed of sufficient patrimony to enable them to follow such a course of study as alone can raise them to eminence in the fine arts, to endeavour to improve those professions in which a taste for painting is required, it would be a more lucrative field for their exertion. I know no profession that stands more in need of this than that to which you have been bred; and if you will follow my advice, you will apply yourself to its improvement, instead of struggling with the difficulties that you must meet in following the higher walks of art.’ In conclusion, he encouraged his *protégé* by promising him his own house at Abbotsford to begin upon, the building of which had just commenced. I need scarcely add that this advice was followed, and the illustrious individual who gave it lived to see and acknowledge the satisfaction he felt from the beneficial effects that resulted from it. I trust its insertion here may be equally serviceable to others, for it would have been well for many who are now struggling with those difficulties pointed at in Sir Walter's advice, had they, upon being seized with the mania of becoming artists, had such a counsellor.”

The reader will be pleased to learn, that the indivi-

dual who thus tells his own story, instead of being a third or second-rate artist, trembling with nervous apprehension about the position in which a picture may be hung at an exhibition, as really affecting his prospects in life, is the master of a large establishment, giving employment to a great number of men.

Mr. Hay's book on the 'Laws of Harmonious Colouring,' treats of the nature of colours, their relation and adaptation to each other, the most appropriate styles of colouring for rooms of different character, and also for rooms of a similar character when differently exposed to the sun, &c. The house painter and decorator will find it a useful production. Let them study the science of their profession. By elevating it, and thus assisting to improve the taste of the people, they will most effectually serve themselves.

AGRICULTURE, GARDENING, &c. OF CHINA.

[Concluded from No. 300.]

HITHERTO Lord Macartney had only seen the eastern side of the gardens of Gehol; but a few days after he was conducted over the western part, which is much the larger of the two.

“The western garden,” continues his lordship, “forms a strong contrast with the other, and exhibits all the sublimer beauties of nature in as high a degree as the part which we saw before possesses the attractions of softness and amenity. It is one of the finest forest scenes in the world; wild, woody, mountainous, and rocky; abounding with stags and deer of different species, and most of the other beasts of the chase not dangerous to man. In many places immense woods, chiefly oaks, pines, and chestnuts, grow upon almost perpendicular steeps, and force their sturdy roots through every resistance of surface and of soil, where vegetation would seem almost impossible. These woods often clamber over the loftiest pinnacles of the stony hills, or, gathering on the skirts of them, descend with a rapid sweep, and bury themselves in the deepest valleys. There, at proper distances, you find palaces, banquetting-houses, and monasteries (but without Bonzes), adapted to the situation and peculiar circumstances of the place; sometimes with a rivulet on one hand, gently stealing through the glade; at the other with a cataract tumbling from above, raging with foam, and rebounding with a thousand echoes from below, or silently engulfed in a gloomy pool or yawning chasm.

“The roads by which we approached these romantic scenes are often hewn out of the living rock, and conducted round the hills in a kind of rugged staircase, and yet no accident occurred in our progress; not a false step disturbed the regularity of our cavalcade, though the horses were spirited, and all of them unshod. From the great irregularity of the ground, and the various heights to which we ascended, we had opportunities of catching many magnificent points of view by detached glances; but after wandering for several hours (and yet never wearied with wandering) we at last reached a covered pavilion, open on all sides, and situated on a summit so elevated as perfectly to command the whole surrounding country to a vast extent. The radius of the horizon I should suppose to be at least twenty miles from the central spot where we stood; and certainly so rich, so varied, so beautiful, so sublime a prospect my eyes had never beheld. I saw everything before me as on an illuminated map; palaces, pagodas, towns, villages, farm-houses, plains, and valleys, watered by innumerable streams; hills waving with woods, and meadows covered with cattle of the most beautiful marks and colours. All seemed to be nearly at my feet, and that a step would convey me within reach of them.

“I observed here a vast number of what we call in

England *sheet* cows; also sheet horses, many pye-balls, dappled, mottled, and spotted—the latter chiefly strawberry.

“From hence was pointed out to us by the minister a vast enclosure below, which, he said, was not more accessible to him than to us, being never entered but by the emperor, his women, and his eunuchs. It includes within its bounds, though on a smaller scale, most of the beauties which distinguish the eastern and the western gardens which we have already seen; but, from everything I can learn, it falls very short of the fanciful descriptions which Father Attiret and Sir William Chambers have intruded upon us as realities. That within these private retreats various entertainments of the most novel and expensive nature are prepared and exhibited by the eunuchs, who are very numerous (perhaps some thousands) to amuse the emperor and his ladies, I have no doubt; but that they are carried to all the lengths of extravagance and improbability those gentlemen have mentioned, I very much question, as from every inquiry I have made (and I have not been sparing to make them) I have by no means sufficient reason to warrant me in acceding to, or confirming, the accounts which they have given us.

“If any place in England can be said in any respect to have similar features to the Western Park, it is Lowther Hall in Westmoreland, which (when I knew it many years ago), from the extent of prospect, the grand surrounding objects, the noble situation, the diversity of surface, the extensive woods, and command of waters, I thought might be rendered by a man of sense, spirit, and taste, the finest scene in the British dominions.”

In Mr. Barrow's volume of 'Travels,' there is a view in the eastern part of the park at Gehol, from a sketch made by Captain Parish, who accompanied Lord Macartney in his excursion through the grounds. Though the plate of it before us is but indifferently executed, and very badly coloured, it gives us an idea of a lovely scene, and justifies the warm descriptions of his lordship, whose qualifications as a judge in the matters of landscape-gardening, and whose taste and unimpeachable judgment and veracity, we have insisted upon.

The fanciful descriptions of the grounds and buildings to which his lordship alludes, and which long passed current in the world as true and correct, were contained in a letter of the Jesuit Attiret, inserted in the twenty-seventh volume of 'Lettres Edifiantes,' published at Paris in 1749; and in a curious folio volume with twenty-one copper-plates, and about the same number of pages of letter-press, entitled 'Designs of Chinese buildings, furniture, dresses, machines, and utensils, engraved by the best hands from the originals, drawn in China, by Mr. Chambers, architect, member of the Imperial Academy of Arts at Florence. To which is added, a description of their temples, houses, gardens, &c., which was published in London in 1757.

The Jesuit evidently exaggerated what he had seen, and fancied what he had not seen; and Chambers' descriptions were not those of an eye-witness, and, on the subject of gardening, compiled from the conversations and accounts of a Chinese painter whom he calls Lep-qua. It is therefore needless to add that they imply every excellence in the Chinese, uniting extreme and contradictory qualities, and forming, on the whole, gardens more magical than that of Armida, in the poem of 'Torquato Tasso,' or of Alcina, in the perhaps still more enchanting verses of 'Ariosto.'

The grounds of *Yuen-min-yuen*, another imperial park, which is situated near to Peking, have been partially described by Mr. Barrow, and in a way which agrees with Lord Macartney's advantageous estimate of the landscape-gardening of the Chinese. Here, as at Gehol, the hand of art, at the expense of incalculable labour,

had produced representations that seemed to have proceeded from the free hand of nature; and nothing indeed, where almost everything was artificial, could be considered as an offence to nature.

The gardens of the emperor, which are numerous, seem generally to have been laid out in magnificent extent and beautiful detail; but to have been neglected, in part, of late years, and suffered to go to decay. De Guignes the younger says, "the gardens we saw near the lake *Sy-hou*, at *Hang-tchu-fou*, must have been very beautiful when they were properly kept, but, as I have observed before, the works of the Chinese require continual care, and when ever so slightly neglected, are soon destroyed."

The residences of the mandarins have nearly always a garden attached to them, even in the capital city, and some of their country houses are described as situated in the midst of parks, groves, and gardens; where all the industry and ingenuity of the natives are exhausted.

What is, however, more interesting than the immense demesnes of royalty, and the costly gardens of nobility, is to see that the people devote themselves, for their own gratification, to that beautiful industry by which the lowliest cottage may be adorned, and one of the purest of pleasures cheaply procured. The attention paid by many of our own peasantry to the neat hedges before their cottages, to the little flower plot, to the honeysuckle or the woodbine, that clusters round the cottage porch or climbs its wall, is among the things that first strike a foreigner, and which give so much of its beauty and interest to old England; and it appears that in some provinces this pleasing effect is rivalled by the peasants of China. Mr. Ellis, in one part of his journey, particularly mentions that "the front of all their houses is set off by some flowering shrubs, or dwarf trees; and not seldom a bower of treillage work, with beautiful creeping plants, adds convenience to ornament."

We learn from Mr. Clarke Abel, the naturalist, that the plant thus trained on small frames of trellice-work, and which, from its frequent culture, is obviously a favourite, is the elegant *Ipomœa Quamoclit*. The same intelligent gentleman found also abundantly cultivated in pots the *Begonia Evansiana*, *Largestœmia indica*, *Hermorocallis japonica*, *Punica granatum*, dwarfed, *Cassia Sophora*, *Nerium oleander*, *Lychnis coronata*, and *Tradescantia cristata*, with a species of *Dianella*, bearing purple flowers, of *Hibiscus*, and of *Plumbago*. But cultivated and prized above all others was the *Nelumbium speciosum*, the sacred flower, the *Lien-wha* of the Chinese. "This splendid flower," says Mr. Abel, "celebrated for its beauty by the Chinese poets, and ranked for its virtues among the plants which, according to Chinese theology, enter into the beverage of immortality, flourished in the greatest vigour in the gardens of *Tung-chow*. It was raised in capacious vases of water, containing gold and silver fish, supported on stands a few feet from the ground. These were surrounded by steps of different elevation, supporting other plants mingled with artificial rocks, representing a hilly country, and covered with diminutive houses, pagodas, and gardens. In this situation the *Nelumbium* was certainly an object of exceeding beauty. Its tulip-like blossoms of many petals, tinted with the most delicate pink, hung over its fan-like leaves, floated on the surface of the water, or, rising on long footstalks of unequal length, bent them into elegant curves, and shaded with graceful festoons the plants beneath." This *Lien-wha* is not only to the Chinese, as a flower, what the Gul or rose is to the Persians, but it is highly prized by them also for its esculent and medicinal properties. Its seeds, resembling in size and form a small acorn without its cup, are eaten green or dried as nuts—their flavour is like that

of a nut: they are often preserved as sweetmeats. Its roots, which are sometimes as thick as the arm, are in a raw state eaten as fruit, being juicy, sweet, and refreshing; and when boiled they are served up as vegetables. The leaves are said by the Chinese to possess a tonic quality; the seed vessel to be efficacious in cases of parturition, cholera, and poison. It is cultivated in all parts of the empire (but seems to flourish better in the northern than the southern provinces), on lakes and other expanses of water, and ornaments and renders productive marshes which would otherwise be unsightly and barren. In the neighbourhood of *Yuen-min-yuen*, and under the walls of Peking, the capital of the empire, our travellers saw it covering with lovely pink and yellow blossoms immense tracts of land, and could sympathize with the enthusiasm of the Chinese poets, who number among the supreme delights of mortal existence, a moonlight excursion on a tranquil river covered with the flowering *Lien-wha*.

Mr. Abel adds, that wherever he went the peasants were liberal in their gifts of cultivated plants, allowing him to select specimens for drying; and whenever he expressed a wish to possess living ones, they readily gave them to him, accepting in return little presents, of which black-lead pencils and common English writing-paper were the most prized.

THE PRISONS OF SCOTLAND.

It is painful to consider that, in such a country as Great Britain, the important subject of prison economy has been suffered to linger completely behind the improving influences of the age. Individuals laboured zealously in the cause; then associations, such as that of the Society for the Improvement of Prison Discipline, gathered information, and endeavoured to concentrate public opinion upon it; and at last the Government directed its attention to the subject by the formation of a Commission. But a great deal has yet to be done before the prisons of Great Britain are placed on a footing at all answering to the advances which have been made in moral and political knowledge, or even as is demanded by a due sense of our own interests.

The wretched condition of the gaols of Scotland attracted, at successive periods, the attention of Parliament. In 1818 and 1819, a Committee of the House of Commons was employed in carefully investigating the subject: "but the only result," says the Report of the Commissioners on Municipal Corporations in Scotland, "of their labours was the passing of the Act 59 Geo. III., c. 61, by which the commissioners of supply in counties were authorized to assess the whole landed and house property in the counties, in such sums as they might think necessary, to assist royal burghs in rebuilding gaols which have fallen into disrepair. But the Act is very defective in its provisions: it only applies to the rebuilding of gaols on their old sites, however inconvenient; and it is not imperative on counties to give any sum whatever, even for that object."

Public opinion, however, has compelled a comparative improvement in the management of the prisons of Scotland within the last fifteen or twenty years. Mr. Frederick Hill, one of the Commissioners for the Inspection of Prisons, in his Report, which was published in the spring of the present year (1836), states that, in the great majority of prisons which he visited, the inmates generally enjoy good health; and in no instance did he hear of gaol-fever, or witness any of the distressing and revolting spectacles so often met with by the philanthropist Howard; neither did he see anything nearly so bad as that described by Mr. Buxton, in his notice of some of the English prisons in the year 1818.

"Any one," adds Mr. Hill, "who may entertain doubts as to the improvement which has been effected in prisons, would, I think, have those doubts removed by visiting the loathsome dungeon, in use till within the last few years, at Perth, and which, though now abandoned, has not yet been pulled down."

Until within these twenty years, the two principal prisons of Edinburgh were the Tolbooth in the High street and the Canongate Gaol, a view of which is given in the wood-cut. The Tolbooth was taken down in the year 1817. Sir Walter Scott, who had an antiquarian and poetic veneration for the old building, associated as it was with the scenes in his 'Heart of Mid Lothian,' procured the stones which composed the gateway, together with the door and its ponderous fastenings, which he employed in decorating the entrance of his kitchen-court at Abbotsford. The Canongate Gaol still stands, but since the erection of the Calton Hill Gaol, it is used only for the confinement of debtors, for which purpose it is kept up at the expense of the city of Edinburgh. The number of debtors in it on the 22nd of October, 1834, was seventeen.

The district in which it lies, the Canongate, is one of the most ancient burghs of regality in Scotland. It belonged to the abbots of Holyrood, who received from King David, Robert Bruce, and Robert III., many powers and privileges, among which was the right of laying down rules for the regulation of the inhabitants. The abbots continued superiors of the burgh till the Reformation. The abbey of Holyrood, like many other religious houses, enjoyed the privilege of Sanctuary. After the Reformation it continued, as being within the precincts of the royal palace, to be regarded as an asylum for debtors, and perhaps petty offenders; and it still retains its privilege of exemption from personal arrest for civil debts. It is the only sanctuary in Scotland. The same privilege was at one time claimed for the Castle of Edinburgh, but the Court of Session disallowed it. The gaol of the abbey was lately rebuilt at the expense of the government, and a person contracting debt while in the sanctuary, may be imprisoned in it. The boundaries of the sanctuary comprise the King's Park, Salisbury Crags, and the greater portion of Arthur's Seat.

Sir Walter Scott, in his 'Chronicles of the Canongate,' has embodied the peculiarities and privileges of this somewhat singular *locale*, which, he says, "bears, or rather once bore, the same relation to the good town that Westminster does to London." His picture of the occasional amusements of an individual who was enjoying the privilege of the sanctuary is at once laughable and true. He represents him walking day after day by the side of the kennel which divides the sanctuary from the unprivileged part of the Canongate, and envying the little boys damming up the puddle, who could stand on either side as they pleased; while the hero himself would occasionally hop across for a minute or two, as if to show his daring.

It is not our present purpose to enter upon a general view of the prisons of Scotland. We may mention, however, that though, as compared with what they were, there is an improvement, their general condition and management is very far below what it ought to be. For instance, the gaol of such an important city as Glasgow is deficient in, or rather destitute of, all those necessary arrangements which are requisite to insure that imprisonment, if it be not beneficial, shall at least not be deteriorating. This gaol was erected shortly before the old Tolbooth—the scene of Rob Roy's encounter with Baillie Nicol Jarvie—was taken down. (See 'Penny Magazine,' No. 224.) As a set-off to the gaol, the Bridewell of Glasgow is admirably managed. The oldest portion of it was erected about thirty-eight years ago—but extensive additions were

made in 1823 and 1824, at the expense of 25,000*l.* There is room in it for sixteen classes of prisoners, each male prisoner having a separate cell, and only in a few instances are two females put into the same cell. It is the only prison in Scotland where female officers are employed. Here the prisoners are all set to work; provision is made for their moral improvement; and the entire management, under the governor, Mr. Brebner, has made his name justly known over the country. "Upon the whole," says Mr. Hill, "the experiment of the Glasgow Bridewell has been very successful; and offers great encouragement for the further development of its principles, and the removal of the causes which impede its operation. The prisoners, instead of being farther corrupted by idleness and evil association, as is the case in almost all the other prisons of Scotland, are, to a great extent, insulated from each other, and engaged in useful and productive labour; by which their habits are improved, and the greater part of their cost defrayed, and means are afforded them (at least to those who remain a

sufficient time), on their return to society, to support themselves in an honest and creditable manner; and while this is going on, the health of the prisoner is also improving; so that unmixed good appears to be the result." In another part of his report, Mr. Hill states that—

"It has been shown, by the experience of the Glasgow Bridewell, that under good arrangements the cost of a prisoner to society need not be more than two-pence a-day, including all expenses except rent; or say three-pence a-day, including rent. How trifling is this sum when compared with the cost to society of an offender at large! I believe it is mentioned on trustworthy evidence, in the 'Report of the Poor Law Commissioners,' that a London pickpocket considers it about an average day's work if he succeeds in stealing five silk pocket handkerchiefs, for which he receives about 5*s.*; but the loss of which to the owners certainly cannot be estimated at less than from 12*s.* to 15*s.* Now this sum would maintain a prisoner in the Glasgow Bridewell fifty or sixty days."



[Canongate Gaol, Edinburgh.]

* The Office of the Society for the Diffusion of Useful Knowledge, is at 59, Lincoln's Inn Fields.

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THE ARCH OF TRAJAN.



[Arch of Trajan, at Benevento.]

THE 'Penny Magazine' (No. 289) may be referred to for some information concerning the dimensions of the most celebrated triumphal arches. At first they were raised to serve the temporary purposes of a military procession, and no traces of them remained after it was over. Trees were transplanted and hung with trophies taken from the enemy; or an erection of wood served as an orchestra, which was decorated with warlike spoils, symbols of captured towns, and perhaps prisoners in chains; and as the conqueror passed beneath he was greeted with music, and a crown of laurel was placed on his head. These were doubtless the models which it was proposed to imitate when something more durable than a temporary construction was contemplated. The Greeks do not appear to have commemorated the exploits of their great warriors in this way; but the practice was common among the Romans from the earliest period of their history. In the infancy of Roman power and art, the triumphal arch was of the simplest construction, and, from the representations on old coins, appears to have often consisted of a couple of pillars, without any basement, the architrave with which they were surmounted forming a single arch. Afterwards their size was increased, and art, in its higher attributes, contributed to render them mag-

nificent and imposing objects. They formed a square mass, and consisted of one, two, or three arches, crowned by an elevated pediment, which was sculptured with bas-reliefs, or bore some inscription, and the pediment itself was surmounted with figures of Victory, Fame, equestrian statues, triumphal cars, or other analogous ornaments.

The triumphal arches now in existence are of three different kinds:—those having one arch, as that of Titus at Rome, and the arches of Trajan at Ancona and at Benevento; those which consist of two arches, as the one at Verona; and lastly, those having a large central arch and a smaller arch on each side. Of this last kind are the arches of Constantine and Severus, at Rome. Besides arches erected in honour of great military deeds, constructions of a similar form were raised for other honorary purposes. The emperors Gallienus, Trajan, and Adrian, erected arches at Rome, Ancona, and Athens, on which were inscribed the names of their respective wives, and the ornamental parts of these arches contained no allusions to triumphs or victories. Arches of a similar construction have sometimes served honorary purposes, and at the same time formed one of the gates of a walled town; the arch of Drusus, at Rome, may be mentioned as one of this class.

The arch of Constantine, at Rome, is in a better state of preservation than any of the ancient structures of this kind, and the sculptures remain nearly entire, with the exception of the figures with which it was surmounted. Some of the materials of Trajan's arch were employed in its construction, and thus the bas-reliefs with which that fine monument were ornamented have been preserved to our days. The arch of Severus is similar in style to the arch of Constantine, but the sculptured parts exhibit greater unity of design. The arch of Titus was erected after the death of that emperor, and is the first in which the composite style was introduced, but it is now considerably dilapidated. It is on this arch that the golden candlestick and other articles taken from the temple of Jerusalem are sculptured.

The triumphal arch at Benevento, represented in the engraving, was erected in honour of Trajan, and is one of the most interesting remains of antiquity; but not being in the ordinary route of travellers, it is comparatively little known. The columns are of the composite order, and are placed on a common pedestal, the base of which is in the Grecian style; the proportions of the various parts are considered remarkably fine. The architectural perfection of this monument of Roman triumph and power is not its sole claim to admiration, as the sculptures with which it is ornamented are equally appropriate and excellent. The space between the columns is transversely separated with much taste by a small frieze, and the compartments are filled with bas-reliefs. The inscription is placed on a projection of the parapet, and on each side are large figures in bas-relief, in the same style as those on the arch of Constantine. They represent different actions in the life of Trajan, and are not inferior, either in conception or execution, to those for which the arch at Rome in honour of the same emperor has been so deservedly celebrated. Trajan was made emperor at the close of the first century. He exhibited great military qualities, and was liberal and enlightened as a statesman. Bred in the camp, he was not versed in literature, but he was, nevertheless, anxious to cultivate the friendship of men of talent. He appointed Pliny to the government of Pontus and Bithynia, and a series of letters passed between him and the emperor which afford many proofs of Trajan's sound judgment and good understanding. Trajan subjugated the Dacians, and his wars with them and the Parthians, and other people in the East, form the chief military exploits of his reign. The site of the bridge which he erected across the Danube is no longer known, and modern art is only just attempting to effect a similar work. For a period of 250 years after his death the senators were accustomed to greet the accession of a new emperor with the wish that he might be more fortunate than Augustus and better than Trajan.

REMARKABLE STORMS IN ENGLAND.

BEFORE newspapers became established and current mediums of exchange, their province was largely occupied by single sheets and pamphlets, issued on occasion. One fruitful source of these pamphlets was the storms which almost annually visit our island. The old proverb of its being "an ill wind that blows nobody good," was clearly understood by the printers and publishers of the seventeenth and early part of the eighteenth century; and so they always took care to turn into good account "the mighty stormes of winde, thunder, lightning, haile, and rain, with inundations of water." Truly might it be said of them that "they exhausted worlds, and then imagined new." What with "the dreadful and most prodigious tempest,"—"the wonderful works of late by an earthquake, lightning, and

whirlwind," and other scaring titles, far more alarming in sound than these, our ancestors must have thought themselves well off that they were not annually all swept into the ocean.

The storm which happened towards the end of the year 1703 is always referred to under the title of the "Great Storm," as the most remarkable on authentic record in this country. It appears, indeed, to have been a very violent one, and to have required no aid from the rude garnishing of the wonder-making publishers. It occurred on the night of the 26th and morning of the 27th of November, or, according to our present mode of reckoning, the 8th of December, 1703. The force of the wind, which was very strong, caused immense damage. Houses were unroofed, and many blown down; ships were lost; and property to a great extent destroyed. The first Eddystone Lighthouse perished during the storm*. Of lives which were lost may be mentioned, Rear Admiral Beaumont, who perished, with the crews of several ships, on the Goodwin Sands; and Dr. Kiddar, the Bishop of Bath and Wells, who with his lady was killed by the falling of a portion of the episcopal palace. Amidst the numerous accidents, there occurred, as might naturally be supposed, many remarkable preservations.

A day of fasting and humiliation was appointed by Government, which was well observed by all ranks, from the impression which had been left on their minds by the effects of the tempest. A great many sermons were published which had been preached on this day, most of them containing such particulars of the storm as more immediately interested the preacher's locality.

Of accounts of the disaster, the most remarkable was that compiled by De Foe†, the author of 'Robinson Crusoe.' It was not published with his name, but there appears to be no doubt that it was written by him. The title of it is 'The Storm; or, a Collection of the most Remarkable Casualties and Disasters which happened in the late Dreadful Tempest by Sea and Land.' He has a chapter in it on "The Opinion of the Ancients that this Island was more subject to Storms than other Parts of the World," which he labours to confute by tracing the notion partly to the state of the island before it was drained and enclosed by the industry of the inhabitants, and partly to the ignorance of the ancients in the art of navigation. Speaking of the storm, he says, "It is impossible to express the concern that appeared in every place. The distraction and fury of the night was visible in the faces of the people, and everybody's first work was to visit and inquire after their friends and relatives. The next day or two was almost entirely spent in the curiosity of the people in viewing the havoc the storm had made, which was so universal in London, and especially in the outports, that nothing can be said sufficient to describe it."

The Rev. William Derham, a Fellow of the Royal Society, thus describes the storm in the 'Philosophical Transactions' for 1704. "Of the preceding parts of the year (1703), the months of April, May, June, and July, were wet in the southern parts of England, particularly in May, when more fell than in any month of any year since 1690; June also was very wet; and though July had considerable intermissions, yet on the 28th and 29th there fell violent showers of rain: and the newspapers gave accounts of great rains that month from divers places of Europe.

"On Thursday, November 25, the day before the tempest, in the morning, there was a little rain, the winds high in the afternoon. In the evening there was lightning, and, between nine and ten o'clock at night,

* See 'Penny Magazine,' No. 20.

† See a brief Memoir of his Life in No. 67 of the 'Penny Magazine.'

a violent but short storm of wind, and much rain. Next morning, November 26, the wind was S.S.W., and high all day, and so continued till I was in bed and asleep. About twelve that night the storm awakened me, which gradually increased till near three that morning. And from thence till near seven it continued with the greatest violence; then it began to abate slowly, and the mercury to rise swiftly.

"The degrees of the wind's strength not being measurable, but by guess, I thus determined with respect to other storms: on February 7, 1699, was a terrible storm that did much damage; this I number ten degrees: another remarkable storm was February 3, 1702, at which time was the greatest descent of the mercury ever known; this I number nine degrees. But this last of November I number at least 15 degrees."

A bookseller in Paternoster Row, of the name of Taylor, having experienced a remarkable preservation during the storm, left a small sum of money for a sermon to be annually preached in commemoration of the event. Being a dissenter, the money was bequeathed to the chapel of which he was a member, in Little Wild Street, Lincoln's Inn Fields, where the observance is still kept up.

Passing by other remarkable storms since 1703 (of one of which a curious account is given, along with a map, entitled, 'The Passage of the Hurricane from the Seaside, at Bexhill in Sussex, to Newington Level, on the 20th May, 1729,') we may come to the year 1783, commemorated by Cowper in his 'Task.' This was a remarkable and portentous kind of year. During a large portion of the summer a fog prevailed in various parts of Europe, which gave the sun a dull red appearance, such as the fogs of winter sometimes produce. In the earlier part of the year occurred the succession of earthquakes which laid waste Calabria. In August and October there were some remarkable meteoric phenomena, which were seen all over Great Britain, as well as on the Continent. Some parts of England were visited by an untimely frost, in the month of June, as described by Sir John Cullum in the 'Philosophical Transactions.' Cowper thus alludes to these things in the second book of the 'Task:—

"Sure there is need of social intercourse,
Benevolence, and peace and mutual aid,
Between the nations, in a world that seems
To toll the death-bell of its own decease,
And, by the voice of all its elements,
To preach the general doom. When were the winds
Let slip with such a warrant to destroy?
When did the waves so haughtily o'erleap
Their ancient barriers, deluging the dry?
Fires from beneath, and meteors from above,
Portentous, unexampled, unexplained,
Have kindled beacons in the skies; and th' old
And crazy earth has had her shaking fits
More frequent, and foregone her usual rest."

Towards the end of July, beginning of August, and in the month of September, 1797, there was a succession of thunder and other storms, accompanied by violent rains, which were felt all over Great Britain, and caused considerable damage. Again, under September 12, 1798, the editor of the 'Gentleman's Magazine' says, "The storm of last night was as tremendous as any remembered by the oldest man living."

The beginning of 1808 was marked by one or two storms unusually severe. One occurred on the 12th of February, which was preceded by a very heavy fall of snow. The winter of 1813-14 is memorable from the great frost. In December, 1814, a succession of gales occurred, in which the strength of the wind was at intervals very great. These gales visited almost every part of the coast of Great Britain and Ireland, and caused much damage.

The great floods in Scotland in 1829 can hardly have been forgotten by the reader. An account of these

floods was published by Sir Thomas Dick Lauder, Bart., in a very interesting volume. "The heat," says Sir Thomas, "in the province of Moray, during the months of May, June, and July, 1829, was unusually great; and in the earlier part of that period the drought was so excessive as to kill many of the recently-planted shrubs and trees. As the season advanced the fluctuations of the barometer became very remarkable. But the usual alterations of weather did not always follow these oscillations; it often happened that the results were precisely the reverse of its prognostications, and observers of the instrument began to lose all confidence in it. That these apparent derangements arose from certain electrical changes in the atmosphere there can be little doubt. The aurora borealis appeared with uncommon brilliancy about the beginning of July, and was frequently seen afterwards, being generally accompanied by windy and unsteady weather, the continued drought having been already interrupted during the previous month by sudden falls of rain, partaking of the character of water-spouts."

The floods were caused by a deluge of rain which fell on the 3rd and 4th of August, by which the Spey, Findhorn, and other rivers and mountain brooks were raised to an unparalleled height, and a great extent of country converted for a time into an inland sea. Bridges, houses, and cattle were swept away, and about 3000 individuals, chiefly dependent on the soil for existence, were reduced to absolute want, which, however, was alleviated by the exertions of the benevolent. The property destroyed was very great.

The winter of 1833-34 was, perhaps, as stormy a one as any in our annals. From November till February it may be said to have blown one continued hurricane. Many hundred ships were wind-bound in our ports all that time, and there was great destruction and loss of life by shipwreck.

The storm which occurred on the 29th of November of the present year was probably as violent as even the Great Storm of 1703, though, from its shorter duration, (and perhaps also from improvements in our social arrangements,) it did not commit similar damage.

WASHERWOMEN—PUBLIC ARRANGEMENTS FOR THEIR CONVENIENCE AT PARIS.

DURING the reign of Louis XIV., the subjects of that miscalled "grand monarque" were never so much gratified as when their sovereign was pleased to present himself to them—without ceremony, it might have been called, if the enjoyment of the people on these occasions had not arisen from their beholding his Majesty going through all the business of life—from rising out of bed to night-time—according to a most elaborate system of etiquette. These habits of publicity passed from the Court into society, and traces of them are still visible in Paris. It is true that the beau no longer places himself in the open street while undergoing the operation of having his hair curled and powdered; but the shoe-black still exercises his useful and commodious vocation; and in the summer evenings the people assemble in groups outside the house, playing cards, or enjoying the close of a sultry day; and there are, besides, the loungers, who occupy the chairs in the Palais Royal, sipping their coffee and reading the journals, and those who assemble in the garden of the Tuileries, and sit listening to the music of the military bands as if they were in a drawing-room. Before the peace of 1815 the business of cooking was often performed in the street in some quarters of Paris; but since that period the habits of the people have become more domestic. The difference of climate between Paris and London will not account for the different habits of the



[Washerwomen on the Seine, Paris.]

two capitals. The number of cold, damp, or rainy days in Paris to one fine day, taking the average of twenty years, is two of the former to one of the latter. In Paris there is a greater proportion of military men, of students and foreigners, than in London. To men in these circumstances their home is merely a lodging; and they are sufficiently numerous, with the addition of the great number of Frenchmen of small independent income who select the capital for their residence, to occasion social arrangements to be framed calculated to meet their wants. The example of the Court doubtless exercised a powerful influence on manners before the Revolution of 1789; climate has had its share of influence; but the origin of several local customs may be most distinctly traced to physical causes. The engraving*, which represents the washerwomen busily employed in a vessel on the Seine, fitted up for the purpose, belongs to the latter class.

In Paris, water must either be purchased of the water-porters at so much per pail, or, if not purchased, obtained at one of the fountains; and in conveying it home as much labour is required as would be equivalent in value to the small sum at which the water is sold by the regular dealer, who charges nothing for the article itself, but only for the trouble of taking it from the place where it flows to the spot where it is required for use. The houses are not, as in London, generally sup-

* The bridge is the Pont Notre Dame, the oldest in Paris, having been commenced in the year 1500. It is 362 feet long by 52 feet broad. Formerly, it was ornamented with statues and medallions of the kings of France, but these have been destroyed. The square tower, rising above the centre of the bridge contains machinery for raising water.

plied with water from pipes conveyed into each residence; and therefore it is found convenient by many of the inhabitants of Paris, and by the *blanchisseuses*, or washerwomen in particular, at once to take the linen to the Seine, where, in several large boats which are provided for them, they may effect their purposes in a more economical manner than if they were to purchase water, or to convey it with great labour to their own apartments. Indeed, those who only occupy a single room, or a couple of rooms, which are altogether destitute of the conveniences to be found in an English kitchen, must escape a great source of discomfort by availing themselves of the arrangement in question. Amongst the lower and many of the middle classes of society in England, this household operation is attended with so much annoyance as to have become proverbial; everything being turned out of its usual course in order that the great business of the day may be got through; and the various processes are not completed for two or three days, some of them even depending upon the elements. Order is only established to be again interrupted by the recurrence of a similar scene of bustle and confusion. It would certainly be advantageous if some plan could be hit upon for rendering the operation less subdivided. By establishments on a larger scale, numerous families might be relieved from a source of annoyance, and the operation rendered more economical at the same time. An attempt was made, a few years ago, to effect an arrangement of this description, but after the experiment had been tried some time it was given up. The process of washing was aided by steam apparatus, and two large establishments were formed,—one at the Isle of Dogs,

near the Thames, and the other on the south side of the river, in connexion with which depôts were established in different parts of the metropolis. The steam process, as far as regarded apparel not made up in an ornamental style, table-linen, &c., was found to answer, and was generally approved of, though it was considered that the wear and tear was greater than by the common mode of washing. The principles of science are capable of far more extensive application to this branch of domestic economy than may be generally supposed. The degree of heat which best aids the operation, and its effects on different materials (on cotton as compared with wool), are each susceptible of being thus determined. The knowledge which is acquired in these matters from long experience, is, in fact, scientific knowledge; since it is the result of a careful observation of the operation of certain uniform effects: it is incomplete, however, since the causes of these effects are not investigated.

It is perhaps deserving of consideration whether the female inmates of prisons and hospitals might not to a greater extent be employed in washing linen. When worthy Mrs. Tatnall* endeavoured to ameliorate the moral condition of the female prisoners in Warwick Gaol, she found great difficulty in providing them with suitable employment; and at present the practice chiefly is, to provide them with the raw material proper for the manufacture of some article which they are capable of making up. But the labour of those who do not possess sufficient skill to enable them profitably to undertake work of this description might be otherwise applied, in washing the clothing sent from hospitals, infirmaries, and other establishments of a similar nature. If a per-centage on the charge were given to the prisoners, their industry would be encouraged, and the connexion between labour and its reward would be exhibited to them in a beneficial light. At the Penitentiary at Pentonville the inmates are employed in washing for families;—in the workhouses the female inmates might, some of them, perhaps be similarly employed. The workhouse inmates were formerly suffered, in many instances, to pass the livelong day in utter indolence; and at the Gravesend workhouse some of the female paupers were accustomed to go to bed in the forenoon to pass away the time, and in the afternoon they sometimes received their friends at the tea-table. The most deplorable consequences could not but result from this state of things, which, happily, no longer exists. Work, such as washing, might be performed at the poorhouses in the same way that sewing is taken in at the Schools of Industry.

The operation of washing has doubtless undergone many gradual improvements. Pliny states that soap was first made by the Gauls, and that it was composed of tallow and ashes. The different sorts of soap at present made in this country are thus described in the 'Excise Regulations':—"Soap is distinguished as hard and soft, the alkalis used for the former being soda and the latter potash. There are three kinds of hard soap; white, made by combining the lees with pure rendered tallow; mottled, made by combining them with tallow and kitchen-stuff, or oil; and yellow, by the combination of the lees with tallow, kitchen-stuff, or oil and rosin. The soft soap is usually made from fish oil, combined with the lees drawn from potash. The chief ingredients used in making all sorts of soap are lees, drawn from ashes or barilla, and quick lime, boiled up with tallow or oil, or a mixture of both." The soap made in the south of France, and those parts of Europe which produce the olive, is considered superior to the soap of this country. In England there are 263 soap-makers, who, in 1835, manufactured 132,027,352lbs. of hard and 7,108,225lbs. of soft soap,

* 'Penny Magazine,' No. 263.

the duty on which amounted to 854,788*l.* In Scotland there are 39 soap-makers, who manufactured in the same year 12,316,691 lbs. of hard and 3,293,056lbs. of soft soap, the duty on which was 90,700*l.*; so that the total amount of duty is nearly 1,000,000*l.*, and before the recent reduction it produced nearly 1,500,000*l.* There are 214 soap-makers in Ireland, but no duty is levied on soap made in that portion of the United Kingdom. Liverpool, Warrington, Runcorn, Poulton, London, Brentford, Bristol, and Newcastle-upon-Tyne are the chief places where the manufacture of soap is carried on. The quantity made at Liverpool in 1835 was 42,000,000lbs.; in London, 33,000,000lbs.; at Bristol, 8,000,000lbs.; at Runcorn, 7,500,000lbs.; at Newcastle, 7,000,000lbs.; at Brentford, above 5,000,000 lbs.; at Bromsgrove, Worcestershire, and also at Dudley, Warwickshire, nearly 5,000,000lbs.; at Hull, 3,250,000lbs.; at Warrington, about 2,500,000lbs.; and the remaining 24,000,000lbs. in various parts of England. More than one-half of the soap manufactured in Scotland is made at Glasgow. The rate of duty was 3*d.* per lb. on hard and 1½*d.* per lb. on soft soap in 1833, but it is now reduced to 1½*d.* per lb. on hard and 1*d.* per lb. on soft. In 1833 the manufactory at Brentford paid 69,663*l.* duty, which, with one exception, was the largest amount collected from any single house; the exception being in London, where the amount paid in duty by one house was 79,288*l.* The number of lbs. of soap consumed annually in England exceeds 100,000,000, exclusive of 14,000,000lbs. used in various manufactures on which the duty is remitted; the domestic consumption being at the rate of above 6lbs. a-year for each head of the population, or about 30lbs. for each family. The reduction of the duty has benefited a larger number of individuals than perhaps could be affected by any other tax of the same amount; and the benefit of the reduction must not simply be measured by the alteration from 3*d.* to 1½*d.* per lb., for if one manufacturer paid so large a sum as 80,000*l.* a-year, the interest on this capital, and the heavier risk which he incurred, must necessarily be made up by an increased price beyond the actual duty; and the same thing being done by the wholesale and also by the retail dealer, the consequences were borne by the consumer to an amount much greater than the mere payment of the Excise duty—in interest to the capitalist, and increased profits which he claimed for the additional liabilities of loss with which he had to contend.

The employment of alkali of an improved description has facilitated the common detergent processes. Within no very distant period the washerwomen of Paris were accustomed to employ the ashes of wood used as common fuel, but now pearlash, which is much better adapted for their purposes, is universally made use of; and an old-fashioned mode of employing an acrid liquid as a detergent is now very seldom resorted to in this country. The cheapness of soap and alkali has enabled even the poorest classes to avail themselves of those articles which aid their labour in the most effectual and economical manner. Prussian blue, which was accidentally discovered by a chemist of Berlin, in 1710, and is employed in giving a clearer and better colour to wearing apparel, must not be omitted; and the duty on starch, which was 3½*d.* per lb., has been totally abolished. These apparently unimportant changes are of great consequence to the mass of the people, as through them, and others to which allusion has been made, manual labour is facilitated, and the task of each individual rendered lighter and more agreeable.

The subject of the present notice does not unnaturally lead to a comparison between the people of France and England as to their respective habits of cleanliness. It has been remarked that, while the body apparel of a

Frenchman is less clean than that of an Englishman, the habits of the French are much superior to our own so far as a clean skin is concerned. The bath is a luxury which is enjoyed by all classes, without exception, in France, while it is almost unknown to any class in England. The French, as respects personal ablutions—not the hands and face merely,—are, there is every reason to believe, a more cleanly people than the English. The slowness with which improved habits make their way is in no instance more striking than in the nearly complete disuse of the bath in England. Although there are few restoratives after extreme fatigue so excellent and simple as a bath, yet scarcely any of the large inns, either in London or the country, to which many thousand travellers resort in the course of a year, possess the accommodations of a bath; and if they do, the charge is so high as to be wholly out of the reach of great numbers of persons. In Leeds and various large towns, the attempt to establish public baths has generally failed, in spite of the support of the affluent and more enlightened part of the community. The Leeds baths, after a long trial, were on the eve of being sold the other day; and would have been disposed of but for the exertions of a number of public-spirited individuals. M. Millot, who analyzed the expenditure of the inhabitants of Paris, found that, on an average, the washerwoman cost more than the schoolmaster; the librarian and bookseller half as much as the theatre; the bath the same as the bookseller, and half as much as for tobacco. Now, if half as much money were expended on the bath as on tobacco in London, about 180,000*l.* per annum would be the sum so laid out. But in London the class which consumes the greatest quantity of tobacco is the least acquainted with the advantages of the bath, while in Paris the baths on the Seine, and in every part of Paris, are frequented by the tobacco consumers. A bath which costs 10*d.* in Paris will in London be as high as 2*s.* 6*d.* or 3*s.* 6*d.*, and the dearness of the luxury necessarily confines it to a few. If rendered cheap, there is every probability that well-conducted establishments in London would succeed. This is the point to which the projectors of such establishments should chiefly direct their attention. Baths are cheap in Paris because a greater number of people resort to them than in London. The experiment of looking for a remuneration to a large instead of a circumscribed number deserves to be tried. The larger the number of frequenters, the more regular would be the receipts of the proprietors of a public bath.

HUTTON'S LIFE, WRITTEN BY HIMSELF.

[Continued from No. 298.]

WE left our hero at Birmingham. His return journey to Nottingham was the most wretched he ever made; for wishing to take Swithland in his way, to visit his aunts, he was directed through Tamworth, and then, by cross-country roads, to Charnwood forest; where he lost himself in a dark night, among bogs, hills, rocks, and precipices. At last he stumbled upon a half-ruined cottage upon the waste, and was most reluctantly admitted into it. His description of this abode of misery and despairing indolence, and the night he passed there, is striking and impressive, even beyond his usual manner. The palette of Crabbe never held a darker or a truer tint to paint

“What forms the real Picture of the Poor.”

On his return to Nottingham, Hutton gave notice to quit Southwell, and prepared for a total change of life. On the 10th of April (1750) he entered Birmingham for the third time, and on the 11th perambulated the streets in search of a shop. He finally

agreed with a poor woman, who lived at No. 6, Bull Street, for the lesser half of her small shop, for which he was to pay one shilling a week rent. Walking back to Nottingham, he met there one Mr. Rudsall, a dissenting minister of Gainsborough, with whom his sister had once lived as a servant. Rudsall was travelling to Stamford, and offered to pay Hutton's expenses and give him eighteen-pence a day, if he would accompany him. So advantageous an offer was not to be rejected, and William set off with the minister on a dreadful wet day. “He asked why I did not bring my great coat? Shame forbade an answer, or I could have said I had none. The water completely soaked through my clothes, but, not being able to penetrate the skin, it filled my boots. Arriving at the inn, every traveller, I found, was wet; and every one procured a change of apparel but me; I was left out, because the house could produce no more. I was obliged to sit the whole evening in my drenched garments, and to put them on, nearly as wet, on my return the next morning.” This uncomfortable trip, however, led to other advantages besides the eighteen-pences. Rudsall told Hutton's sister that he had a quantity of books to sell. She replied that William had no money to buy. “We will not differ about that,” said her old master, “let him come to Gainsborough, he shall have the books at his own price.” Hutton joyfully walked over to Gainsborough on the 15th of May. “The books,” he says, “were about 200 pounds weight. Mr. Rudsall gave me his corn-chest for their deposit; and, for payment, drew the following note, which I signed:—

“I promise to pay to Ambrose Rudsall, one pound seven shillings, when I am able.”

“Mr. Rudsall observed, ‘You never need pay this note, if you only say you are not able.’” (We scarcely need observe that he was soon able, and then paid it, like an honourable man.) The books, though the refuse of the dissenting minister's library, were more valuable, and made a better show, than any he possessed before.

William had now a severe trial to undergo—to part with his friends, and fix his comfortless abode wholly among strangers. On the 25th of May, he opened his little shop at Birmingham; and having at first few customers, and little to do but look into the street, he thought it singular and melancholy to see thousands of faces and not one that he knew. His sadness was increased by the rudeness of the people with whom he lodged. He had no longer his dear sister to keep his “mess of milk porridge by the fire,” and welcome him home, as when he trudged through hail and rain, from Southwell to Nottingham. He now went out and no one cared for his going; and when he returned, there was no eye to

“Watch his coming, and look brighter when *he came.*”

He tells us that at this period, which his amiable qualities and many merits rendered a short one,—for he soon made friends—he was “never seen to smile,” and that he led a melancholy life, a life of silence and tears. However, when his brother Thomas went to see him, about six weeks after his gloomy beginning at Birmingham, he was enabled to state that the trade had fully supported him. *Five shillings a week had covered all his expenses; as food, rent, washing, lodging, &c.* Towards the close of this solitary year, a few young men of the town, of superior sense and character, took notice of the humble industrious bookseller, and began to frequent his shop. At the year's end, he found he had saved 20*l.*, on which he became more reconciled to his situation. The first of his then humble patrons was Samuel Salte, a mercer's apprentice, who, five years after, resided in London, where he acquired 100,000*l.* He died forty-seven years after the beginning of that intimate friendship which was inter-

rupted only by his death. The tyranny of the poor laws, as they existed at that time (allowing the forcible removal of any person to his place of settlement, if he was likely to become chargeable to a parish) was well nigh proving fatal to Hutton.

"In this first opening of prosperity an unfortunate circumstance occurred, which gave me great uneasiness, as it threatened totally to eclipse the small prospect before me. The overseers, fearful I should become chargeable to the parish, examined me with regard to my settlement; and, with the voice of authority, ordered me to procure a certificate, or they would remove me from the town. Terrified, I wrote to my father, who returned for answer, 'that All Saints, in Derby, never granted certificates.' I was hunted by ill-nature two years. I repeatedly offered to pay the levies (rates), which was refused. A succeeding overseer, a draper, of whom I had purchased two suits of clothes, value 10*l.*, consented to take them. The scruple exhibited a short sight, a narrow principle, and the exultation of power over the defenceless." The old laws of settlement, under which Hutton was persecuted, were greatly changed some years ago; but till within a very recent period great tyranny, of a similar nature in principle, though not so bad in degree, was practised. The Poor Laws' Amendment Act, in spite of the outcry of the wilful and the ignorant, affords now a sure protection for the honest and the industrious against local oppression.

In the following year, 1751, Hutton was encouraged to take a better shop, with a dwelling-house attached, next door to Mr. Grace, the hosier, who, in 1741, had refused him work as a stockinger, and that, too, not very courteously. The rent of his new premises was 8*l.* a-year, a sum that alarmed him at first; but he believed he had now seized the tide that leads on to fortune, and was unwilling to stop through timidity. He also bought a complete suit of mourning, which he wore for the death of Frederic Prince of Wales, whom he so narrowly missed seeing alive when in London; and these new clothes, he informs us, introduced him to some new acquaintance. In the month of August his beloved sister went to visit him, and thinking he must want a companion and housekeeper, and be able to keep one, she took a young lady with her as an intended wife; but William liked not the formality of this proceeding, and the business fell to the ground, notwithstanding that the damsel was tolerably handsome, and appeared agreeable.

He had now a smiling trade—his style and operations were altogether more elevated; and, in addition to his sale-shop, he set up a circulating library, the first ever established at Birmingham. "As I hired out books, the fair sex did not neglect the shop. Some of them were so obliging as to show an inclination to share with me the troubles of the world." All these caps were set at him in vain, but still household and other discomforts kept reminding him that something essential was wanting. As he extended his business and took a shop at Bromsgrove, which he attended every market-day, he was obliged to have a *locum tenens* at Birmingham. He therefore took a female servant—a very bad one; for when he was absent she sold the books in the shop for whatever people would offer, "and got completely drunk with the money." He says, "I ventured upon another female servant, for business continued to call me out. She was recommended by the minister of our congregation (Hutton was bred and continued a Dissenter), who assured me that she would not cheat me, for she feared the Lord. He might be right; but she cheated my dumplings one Sunday, by setting them to boil without water. When we returned from meeting they were burned to a cinder. I found her totally unable to conduct a family even of two persons, and much inferior to a shop." But in the meanwhile the cynosure of his heart for future

years, the "sweet Sarah," whose birth, "quite unknown to *him*, at Aston-upon-Trent" he has recorded under the date of the 11th March, 1731, had settled at Birmingham, and become his next-door neighbour! Mr. Grace, the hosier, who was her uncle, and had become a widower, brought her from Aston to keep his house.

"I saw her," says William, "the night she arrived, and thought her a neat, little, delicate creature, and rather handsome. It was impossible, situated as we were, to avoid an intercourse. Without my having the least idea of courtship she seemed to dislike me, which caused a shyness on my side, and kept us at a distance. The intercourse continued, for as I had no housekeeper I dined with Mr. Grace, at a fixed price. * * * Michaelmas arrived—(this was the year after). Sarah and I had not, of late, looked quite so shy upon each other. Mr. Grace was gone to Worcester-market to buy hops. It was nine o'clock, he not come, and she alone. The night was dark; we stood together at the door expecting him. I thought she seemed to wish I would not leave her. She kept me in conversation, and I was not displeased to be kept. As Mr. Grace rode my horse (for William by this time kept a steed of his own) I also was interested in his return. This did not diminish our acquaintance. * * * * While conversing with my next-door neighbour, Sarah, in November (this was just a year since their acquaintance began), I remarked to her that I perceived a growing affection for her, and should take no pains to check it. She did not receive this short declaration with the least disrespect. Our intimacy increased. By the time Christmas arrived, our hearts had united without effort on either side. Time had given numberless opportunities of observing each other's actions, and trying the tenor of conduct by the touchstone of prudence. Courtship is often a disguise. We had seen each other when disguise was useless. Besides, nature had given to few women a less portion of deceit. I never courted her nor she me; yet we, by the close union with which we were cemented, were travelling towards the temple of Hymen without conversing upon the subject."

At length "mine uncle," the hosier, opened his eyes to what was going on, and at first he opened them with anger; for no other reason, however, than that of losing so excellent a housekeeper as Sarah in so short a space as fifteen months. A lucky windfall, however, raised the old gentleman's spirits, and set all right. "Mr. Grace had a doubtful debt owing at Moseley of about 7*l.* He asked me to accompany him to solicit payment; I consented. He was very cross, and treated me with scolding language all the way, expressive of his aversion to the match. I was silent. Unexpectedly he *received the money*, which gave an instant turn to his temper; and from that moment he became good-humoured, and promoted the marriage. Such are the wonderful effects of money! Though money has been in circulation many thousand years, and its properties often examined, yet those properties are not fully known."

On March 21, Hutton and Mr. Grace went to Aston-upon-Trent to ask the consent of Sarah's parents to the match. They gave it, and offered 100*l.* as a dowry besides. William had already saved 200*l.* of his own. In the month of July following they were married at St. Stephen's Church, Birmingham; and from that happy moment the course of Hutton's fortunes ran as smoothly as is consistent with human affairs and vicissitudes. He had his losses and crosses like other men, but his good fortune and good conduct predominated; and he gradually, if not rapidly, rose in wealth and respectability.

One of the best of his stepping-stones towards wealth was that offered by Robert Bage*, a paper-maker, and

* Robert Bage was a man of worth and literary attainments. He was author of 'Mount Henneth,' 'Barham Downs,' 'James

an old friend, who took him one evening to his inn, and proposed that he should sell paper for him, which he might do either by buying on his own account, or selling on his (Bage's) by commission. As Hutton had ready money to spare he preferred the former plan, and therefore appropriated a room of his narrow premises for the reception of goods, and hung out a sign—"THE PAPER WAREHOUSE." "From this small hint," he says, "I followed the stroke forty years, and acquired an ample fortune." His prosperity did not make him careless or forgetful of his past miseries. Had that been the case, even with his ingenuity, the "ample fortune" would hardly have been acquired. "I never," he adds, "could bear the thought of living to the extent of my income; I never omitted to take stock, or regulate my annual expenses so as to meet casualties and misfortunes." At the same time he did not condemn himself to a penurious, sordid way of life. He kept a horse, and then a pony besides for his little son; and every year made some holiday excursions with his wife and children. One of his journeys is recorded with a feeling that will find an echo in the breast of every fond father. "I went," he says, "to Nottingham Races, and took my son upon a pony. When I surveyed the little man and the little horse, the strong affection of a father taught me to think him the prettiest figure upon the race-ground." As fortune still improved he even set up his carriage, but that was after many years of industry and assiduity.

[To be concluded in our next.]

STROEBECK, OR THE VILLAGE OF CHESS-PLAYERS.

A NEW French periodical work, devoted entirely to the subject of chess, and entitled '*Le Palamède, Revue Mensuelle des Echecs**,' has furnished us with the materials of the following short account:—

Stroebeck is a pleasant, retired village, at a short distance from Halberstadt. Towards the end of the fifteenth century, a dignitary of the Cathedral of Halberstadt was exiled to that solitary village. The good people of Stroebeck gave him so good a reception, that the churchman was much embarrassed as to how he should testify his gratitude. After long reflections he finally concluded he could do nothing better for the villagers than teach them to play at chess, and this he did with such effect, that the good people of Stroebeck were soon supremely happy in this new enjoyment. The exile, after a time, was honourably recalled to his cathedral, and eventually became Bishop of Halberstadt; at the height of his prosperity he did not forget Stroebeck; he loaded that village with benefactions, and founded a school there for the children. A special clause enjoined the masters of the school to teach all their pupils the noble game of chess, and distribute prizes at the end of every year to the best players. These prizes were to be chess-boards, with the pieces all complete. The worthy bishop, in thus encouraging the game of chess, had a moral object, which was happily accomplished; it saved the villagers from games of hazard and the vices those games inevitably bring in their train.

The villagers of Stroebeck gradually abandoned all other pastimes, in order to give themselves up exclusively to chess. The knowledge of the game became hereditary; mothers taught it to their daughters; the old men bequeathed the paternal chess-board to their sons, as a sort of patent of nobility; there was a glorious emulation among families, each trying to surpass Wallace, 'The Fair Syrian,' 'Man as He Is,' and 'Man as He is Not.' When he died (in 1801) Hutton wrote a memoir of his life, which was published in the 'Monthly Magazine.' They had been acquainted sixty years, and were most intimate friends during fifty-one.

* This 'Monthly Review of Chess' is edited by Messrs. De la Bourdonnais and Méry. It commenced at Paris in January 1836.

the other in science, rapidity, and profound combinations. The fame of Stroebeck was spread over Germany—nothing else was talked of—amateurs arrived from all the German circles to contend with the villagers, who almost invariably proved victorious. The evil custom of gambling even here crept in, but, after a time, money was never played for. A stranger, the formidable Silberschmidt, gave them a good lesson. He covered the high stakes they proposed for a certain number of games, and vanquished their champion elect, the Achilles of the village. The men of Stroebeck willingly enough consented to pay the money lost, but they refused to grant the certificate attesting their defeat. "Take the gold," said they, "but leave us our glory." "Good people of Stroebeck," replied Silberschmidt, "the money I have won from you I give to your poor and to your school; but on one condition, which is this—you must swear that henceforward you will never play for money. The noble science of chess carries its interest in itself; a single game won is a treasure of satisfaction to one's *amour-propre*." The villagers took the oath, granted Silberschmidt his certificate, distributed the money as he proposed; and to this day honour is the sole stake on the chess-boards of Stroebeck.

At the club, which is the best room of the best (because the only) inn of the village, an old-fashioned chess-board and its appurtenances are preserved with singular care. Upon the board the village of Stroebeck is delineated in mosaic, and there is also an inscription which states that the chess-board was given to the village by the Elector of Brandenburg on the 13th of May, 1661. The village library, preserved in the same room of the inn, consists of a work by Gustavus Selenus, and a collection, published by Köck, of the best books on chess.

Diseases of the Hip-Joint.—Mr. William Coulson, Consulting-Surgeon to the London Lying-in Hospital, has lately published a valuable work on the 'Diseases of the Hip-Joint.' It is not within our province to notice it as a scientific work, but one or two points deserve observation in a popular sense. The hip-joint is among the strongest of any in the body, and this is necessary because it has to support the whole weight in standing, walking, running, &c. All the parts of this joint have a peculiar character; they are low both in regard to vascular action, and in the scale of sensibility. The value of this is evident, seeing that there is no rest to this joint; for even the slightest motion, however remote, causes less or greater change in the centre of gravity of the body, and compels us to poise the trunk anew upon the hips. Were those parts more sensible, we should be perpetually lame. Happily, there is sufficient sensibility to form an adequate guard against excessive motion of the joint, and little enough to permit the natural use of the limb—a nice adjustment of sensibility to function. Many considerations prove that disease of the hip-joint is constitutional. That it is primarily a disease of the vital or nutritive functions is evident from this, that the mental or thinking functions are unaffected, and that the locomotive functions are involved only in proportion to the progress of the primary disease. But the disease is also brought on by accidental causes, and on this account it is desirable to draw attention to them. "The continued application of cold to the parts," Mr. Coulson says,—“a striking cause of enfeeblement, is a common cause of this disease. I attended a case this year, with Mr. Baker, of the New York Road, in a child of six years old, who had experienced two attacks of the disease within nine months, each attack having been brought on by sitting on the cold steps. Mr. Coulson quotes a passage from Dr. Falconer, to show that exposure to wet is a cause of the disease. "Lying on the damp ground, especially when the body is heated, is the most common and most powerful cause. Labourers in harvest are particularly liable to hazards of this kind, from their lying down, and frequently sleeping under trees, and on the damp ground, when the body is heated with labour and exhausted with fatigue.”

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CRETAN OR WALLACHIAN SHEEP.



[Cretan or Wallachian Sheep.—(*Ovis Aries* ; Var. *Strepsiceros*.)]

THE origin of almost all our domestic animals is wrapped in obscurity,—and this is peculiarly the case with respect to the dog, the horse, the ox, and the sheep. We can identify no wild species as the undoubted type of each respectively. Conjectures, indeed, have been abundantly hazarded, but the mystery has not been solved;—it still remains as it did, a stumbling-block in the paths of natural history.

As we fail, on the one hand, to ascertain with anything like certainty the primitive wild stock of our domestic races, so, on the other hand, are we in utter ignorance as to the circumstances attending the first endeavours to reclaim them from their natural state of independence. The motives which would lead to such an endeavour are sufficiently obvious. It was doubtless necessity that first led man to surround himself with flocks and herds, and call in the dog to be his helper and companion. Of the importance of this step gained in the dawn of man's career on the earth no one can doubt;—it was the starting-point of civilization and of commerce,—it formed a new bond in the league

of human society,—and was the germ of individual property and national prosperity. In all countries where man has emerged from the low condition of a savage, and in all ages, flocks and herds have been regarded among the riches of the possessor. Of all our domestic animals, the sheep was one of the earliest, if not the earliest, that submitted to man;—it has spread with him as he has spread, and is essentially dependent upon his care and protection. The varieties into which it has ramified are extremely numerous; in fact, each country has its own peculiar breeds; but these breeds are not specifically distinct from each other,—they produce a fertile progeny, with the blended features of the parents. It is the opinion of some naturalists that the Mouflon of Corsica is the origin of our European breeds, and the Argali of Siberia of the eastern races. The Argali of Siberia and the Mouflon of Corsica are considered by all naturalists to be specifically distinct; but we cannot regard the sheep of India and those of Europe in this light, nor do we know why a double origin is to be sought for. We are disposed to con-

sider the domestic breeds of sheep as the descendants of a race subject from the beginning to man, and no longer extant in an independent condition.

“Abel was a keeper of sheep.” We conceive that man, prompted by necessity, or some higher impulse, looked round, and found the sheep ready to submit, and, as it were, claiming his protection. For, be it observed, were it not for the care of man, the sheep would speedily rank among the extinct races that have passed away, unless, indeed, its character underwent a total revolution. Destitute of weapons enabling it to resist effectually even the weaker of the beasts of prey,—deficient in address and cunning,—incapable of long-continued speed,—timid and irresolute,—it necessarily requires the care of the shepherd and his dog. Naturally gregarious, the flock follows a leader;—where one goes, all follow in succession,—and thus they often rush headlong into the danger from which they would escape. They are easily alarmed, and seldom venture to resist the attack of even the smallest foe; and in some countries, notwithstanding every effort on the part of the shepherd, they fall in multitudes before the wolf and other ferocious beasts. Their physical constitution is far from being robust, and they are subject to many and fatal diseases. A rank pasturage or a rainy season sweeps off multitudes. No animal, the dog excepted, exhibits so many and so great diversities of external form. The nature of their clothing depends materially on climate. In our latitudes they are covered with a fleece of wool; in intertropical, or hot latitudes, with short close hair; and the most valuable of European breeds, if transported to India or central Africa, immediately loses the fine fleece for which it was so highly prized. But, besides that connected with clothing, other and more material modifications are effected. The number and form of the horns, the shape of the head, the contour of the body, and the length and thickness of the limbs, vary almost infinitely. In one race, originally from Iceland and the Feroe Islands, the head is armed with four heavy, curling horns, which remarkable deviation from the usual rule, is, in the flocks belonging to the nomadic hordes of Tartary, accompanied by an enlargement of the tail and crupper to an enormous extent, in consequence of an accumulation of fat in those parts: this latter peculiarity, however, is very often unaccompanied by the former. The African sheep, covered with short hair, is scarcely to be recognised as a sheep;—it is light, active, and goat-like. Another breed, from Guinea, has long pendulous ears, a loose hairy dewlap, and the back of the head protuberant; its limbs also are of great length, and the tail almost reaches to the ground. The clothing consists of short stiff hairs, but there is a mane along the neck; the horns are small, and twisted round to the eyes. In the mountains of northern Africa there is a wild species of sheep, termed *Aoudad* by the Arabs, (*Ovis tragelaphus*, Desm.) and *Mouflon à manchettes* by the French, from the long hairs forming ruffles around its knees; it is from this species the last-mentioned variety is by some supposed to have been derived, but we know not on what authority, nor is it a very probable theory. There is a fine specimen of the *aoudad*, from the mountains beyond Tunis, in the Museum of the Zoological Society. This animal tenants the high ridges of the rocks, and possesses amazing activity. It is occasionally shot by the Moors of Tunis, Tripoli, and other places on the same line of coast, and young ones are sometimes captured.

Of the multiform varieties of our domestic races, the most beautiful is that figured at the head of the present article; it is the Wallachian sheep, (*Ovis aries*, Var. *Strepsiceros*, Linn.) and the Cretan sheep of Pennant. Though said to be common in Wallachia, Hungary,

Austria, and the western parts of Asia, it is so rarely brought to England, or the adjacent parts of the neighbouring continent, that we can scarcely be said to be acquainted with it. A few years since, a splendid ram which came from Mount Parnassus was presented by Dr. Bowring to the Zoological Society. Like its relatives peculiar to our parts of Europe, it was very stupid, but at the same time vicious and unruly, and of amazing strength. Its horns were very large, spirally contorted, adding greatly to its striking and picturesque appearance. Its wool, if wool it could be called, differed materially in quality and texture from that of our breeds. Instead of being curly and matted, or felted into a mass, it was of great length, perfectly straight, close set, and beautifully fine, falling from the middle of the back on either side of the animal almost to the ground. On the face the hair was short and of a rusty black, on the body it was white. To this description it may be added, that the horns of the male mostly rise almost perpendicularly from the skull, making a series of spiral turns in their ascent, the first turn being the largest, while in the female they diverge, taking a lateral direction. In the specimen, however, to which we have alluded, and which was a male, they extended laterally from the skull, and after the first turn took a downward sweep. It is probable, therefore, that as far as this point is concerned, there is a certain degree of individual variation among the breed, as indeed might be expected, seeing as we do how unfixed are all the external characters of our well-known domestic races, and how soon they are capable of being modified.

According to Belon the present variety occurs in Crete; it appears to have been known in ancient times, and is considered by some to be alluded to both by Oppian and Pliny. With respect to the latter writer, this is very doubtful. In the eleventh book (cap. xlv.) he alludes to an animal called *Strepsiceros*, the horns of which were erect, and wound round by a spiral wreath of rugæ, lyre-shaped and pointed; this animal, he adds, is called Addax in Africa. It is doubtless an antelope.

Buffon, in the third volume of the Supplement to his work, gives a figure of the male and female of this curious race, from a drawing sent to him by Mr. Collinson, of London, from whom he was in the habit of receiving many communications, but he obtained no information connected with their history.

No animal can be more unlike the Sardinian Mouflon than the Cretan or Wallachian sheep; and if that animal be indeed the origin of our domestic breeds, it proves to what an extent the modifications of physical structure may be carried by the arts of man and a combination of causes. The Mouflon is covered with coarse brittle hairs, having nothing of wool in their character; yet as early as history carries us back, has the sheep been celebrated as a wool-bearing animal; and though its wool becomes lost in hot climates, such is not the case in the countries where the Mouflon now exists. The Mouflon, wild, active, and vigorous, tenants the craggy summits of the rocky mountains in Sardinia, Corsica, and some of the Greek Islands. It is also abundant in the mountain ranges of Southern Siberia, where it is subject to a cold rather than a temperate climate; everywhere, however, it preserves its own characters without alteration, while in its domesticated and degenerate descendants, if such they be, which has yet to be proved, we see a perpetual series of variations, a multitude of breeds presenting diverse characters, but all of greater or less value to man; on whose care and protection they all equally rely.

LIFE OF HUTTON, WRITTEN BY HIMSELF.

[Concluded from No. 302.]

IN 1766 he began to make purchases of land, for which he had always shown much fondness; and by buying parcel after parcel and estate after estate, he eventually became a considerable landed proprietor. It was in 1769 he first purchased half an acre of land at Bennett's Hill, on Washwood Heath, near Birmingham, with the view of erecting a country-house upon it. The house, which became the very temple of domestic happiness, was built, and subsequently enlarged and improved; the trees which, in course of time, flourished round the spot, were carried thither as saplings on his own back, and planted by his own hands, circumstances that singularly endeared them to the good old man.

In 1780, in the fifty-seventh year of his age, he published his first work, the 'History of Birmingham,' in which he showed considerable antiquarian knowledge, and a fund of good sense. Five years after, he published a small volume, descriptive of the curiosities of the metropolis, called 'The Journey to London.' In 1787, having made himself master of the rules, by diligent study and long practice, in the Birmingham court, he wrote, for the instruction of others, a good-sized volume, entitled, 'Courts of Request, particularly that of Birmingham, described; with Dissertations on Juries, the Hundred Court, &c. &c.'

During the following year, besides a short history of Blackpool, a watering-place in Lancashire, he published his 'Battle of Bosworth Field, 1485; with Life of Richard III. till he assumed the Regal Power,' an interesting work, with considerable historical and antiquarian research. In 1790 he published the 'History of Derby,' his native place; and in 1793, 'The Barbers,' a poem, and 'Edgar and Elfrida,' a poem.

It was in 1802 that he first published the most generally known of his works—'History of the Roman Wall, which crosses the Island of Britain from the German Ocean to the Irish Sea; describing its ancient State and present Appearance, with Plates, &c. &c.'

The circumstances attending the production of this volume are peculiarly interesting; they present a beautiful specimen of enthusiasm in a favourite pursuit, and of activity, both of body and spirit, at an advanced age, when, in ordinary humanity, the heart grows cold and the limbs are stiff. Antiquarians had long talked about the great wall of the Emperor Severus, without ever being at the pains of visiting it; but William Hutton, in June, 1801, when he was nearly seventy-eight years old, undertook a pedestrian journey of 600 miles, with a wallet and an umbrella at his back, for the purpose of leisurely exploring the whole length of the wall. His daughter Catherine, who accompanied him on the greater part of this tour, travelled on horseback, on a pillion behind the servant, but no persuasion could induce the truly venerable antiquary to relinquish his old and favourite mode of journeying, which must have recalled the by-gone days to his memory, and those travels on foot, performed when youthful blood ran in his veins, though it was chilled and kept low by poverty and sorrow.

"My father," says Catherine Hutton, "was such an enthusiast with regard to the *Wall*, that he turned neither to the right nor the left, except to gratify me with a sight of Liverpool. Winandermease he saw, and Ullswater he saw, because they lay under his feet, but nothing could detain him from his grand object."

Having carefully examined every bank and hollow, and every Roman stone that remained upon another, between Newcastle and Carlisle, and being rejoined by his daughter, who had made an excursion in the interim to Keswick and the Lakes, our hero turned his footsteps homewards to Bennett's Hill. "On our return," says Catherine, "walking through Ashton, a village in Lan-

cashire, a dog flew at my father and bit his leg, making a wound about the size of a six-pence. I found him sitting in the inn at Newton, where we had appointed to breakfast, deploring the accident, and dreading its consequences. They were to be dreaded. The leg had yet a hundred miles to walk in extreme hot weather. I comforted my father. 'Now,' said I, 'you will reap the fruit of your temperance. You have put no strong liquors or high sauces into your leg; you eat but when you are hungry, and drink but when you are thirsty, and this will enable your leg to carry you home.' The event showed I was right. * * * When we had got within four days of our journey's end, I could no longer restrain my father. We made forced marches, and if we had had a little farther to go, the foot would fairly have knocked up the horse! The pace he went did not even fatigue his shoes. He walked the whole 600 miles in one pair, and scarcely made a hole in his stockings*."

Hutton subsequently published (between the years 1801 and 1808) 'Remarks upon North Wales,' 'Tour to Scarborough,' 'Poems, chiefly Tales,' 'Trip to Coatham;' and these, with a few fugitive pieces, and a short but most striking history of the Birmingham riots, in 1791, which is printed in his life, make up, we believe, the list of his literary productions. He closed his career as an author in his eighty-fifth year, having commenced it nearly thirty years before. In one part of his memoirs he asks, "What is a happy life?" There are few such specimens of one on record as his own: Hutton's was indeed a green old age. He says, in answer to his own query, "Suppose a man endeavours after health, and his endeavours are blessed with such success, that, by a proper use of his animal powers, he can, at four score, walk thirty miles a day. Suppose him, by assiduity and temperance, to have obtained a complete independence, that he can reside in a house to his wish, with a garden for use and amusement, is blessed with a son and daughter of the most affectionate kind, who attentively watch his little wants with a view to supply them; add, as an appendage to this little family, a pair of old and faithful horses, who are strangers to the lash, and whose value increases with their years. Still add, to a taste for reading, the benefits arising from a library of choice authors. Would you pronounce this a *happy man*? That man is myself. Though my morning was lowering, my evening is all sunshine."

When the infirmities of age at last, and most slowly, and, as if it were, reluctantly, made their approach, he bore them with wonderful equanimity, and took half the sting out of them by persevering in pedestrian exercise, and maintaining a cheerful enjoying spirit. Under the date of 1811, when he was eighty-eight years old, he says, "At the age of eighty-two I considered myself a young man. I could, without much fatigue, walk forty miles a day. But, during the last six years, I have felt a sensible decay; and, like a stone rolling down the hill, its velocity increases with the progress. The strings of the instrument are, one after another, giving way, never to be brought into tune." For another year, however, did he continue to take his daily walk from Bennett's Hill to Birmingham, and back again; and under the year 1812, he has the following note, the last he wrote himself in the touching history of his life. "This day, October 11th, is my birth-day. I enter upon my ninetieth year, and have walked ten miles."

* Letter to S. J. Pratt, Esq. published in her father's life, p. 241. The whole of this letter is interesting, and creditable to the warm filial affection and reverence of the writer. The pedestrian traveller may derive one or two interesting hints from it. The easy, steady pace, used by Hutton, and which almost looks like a saunter, we know by experience to be the best for getting over a long journey.

The Memoir was continued from this entry by his daughter. We learn from her that, in the year 1813, he still walked to and from Birmingham;—that on the 5th of October, when he only wanted six days of completing his ninetieth year, his strength utterly failed him as he was walking home, and he was obliged to have himself lifted into his carriage,—that on this occasion he said, bursting into tears, “*Now I have done with Birmingham!*”—that henceforward his walks were confined to the gravelled paths of his own grounds, and then to the floor of his own spacious kitchen;—that on the 16th of September, 1815, he was unable to walk or to leave his room,—and that he died on the 20th of the same month, at half-past five in the morning, at peace with all men; in full possession of his faculties almost to the last moment, and aged ninety-two! According to a medical gentleman who attended him, his death presented the rare case of a human being quitting the world from the natural and total wearing-out of the structure, without any mixture of disease. This “last scene of all,” which was cheered by the constant attendance of his dear children—his daughter Catherine and his son Thomas—took place at Bennett’s Hill, in the house he had built, and among the trees he had planted.

The simple words of this man of ninety winters,—“*Now I have done with Birmingham!*” (which proved his farewell, for he never saw that town again,) and the tears he shed, affect us beyond all oratory, and bring, we confess, tears into our own eyes. They must not, however, be taken as expressions of discontent and reluctance. “Men are we, and must grieve,” when old associations are about to be broken up for ever; and William Hutton had constantly frequented Birmingham, the source of his fortune, and been familiar with all its streets and turnings, and busy, happy faces, for upwards of sixty-three years! His few natural tears were soon dried; and, indeed, many years before (in 1798) he had made up his mind for death, and taken a view of the things of this life which is at once calm, philosophic, and religious. He then wrote,—“Perhaps not one in a thousand of the human race has been favoured with so long an existence;—nor one in that number enjoy the health I have been favoured with;—nor one in ten thousand enjoyed equally the benefits of Providence,—notwithstanding I felt most severely the loss of my dearest friends, and fell under the calamities of 1791*.”

“I have lived to see one person an infant, and his son an old man! Have observed about three generations pass by, and five times the number of the present human race sink into the grave! * * When I consider that, within my memory, the surface of the earth is totally altered,—that the old buildings upon that surface have disappeared, and the new become old,—that the former inhabitants have given way to the present, whose opinions and manners are different,—I may say with Dr. Young, ‘This is not the world in which I was born.’”

STOCKHOLM.

THE beauty and peculiarity of the position on which the capital of Sweden is built have excited the surprise and admiration of all travellers. It seems to have been selected with a happy reference both to picturesque effect and commercial convenience, and we are unwilling to believe the popular tradition that attributes the choice of the spot to mere chance. According to this “say” of the inhabitants, about three centuries and a

* The Birmingham Riot. Hutton was one of the greatest sufferers from “that most savage event,” as he justly calls it. Even his house at Bennett’s Hill, “which had for many years been his calm retreat,” was burned to the ground.

half ago, the Viceroy Berger Jarl, or Earl Berger, who then governed Sweden, determined to found a city, but, instead of fixing the spot from the dictates of judgment and taste, he preferred committing the event to chance. To this end he set a piece of wood or stick afloat down the Mälar lake, wisely determining that at whatever place it should stop, there to build his projected town. A small island arrested the stick in its progress, and the name of Stockholm, which, literally translated, means “Stick-island,” is said to have been given it from this circumstance.

Stockholm is built on seven small rocky islands, at the junction of the waters of the Mälar, the most picturesque of all Swedish lakes, with an inlet or arm of the Baltic sea. It in this respect somewhat resembles Venice, but the water that flows between its islets is clearer, and far deeper, than that of the *canali* and *lagune* of the Italian city, admitting the largest ships to sail among the houses. These islands, which are irregularly scattered, are covered with buildings, gardens, and groves, the domes of churches intermingling with oak-trees: at certain points they are connected together by stately bridges, but more direct communications are kept up by means of wherries, that are seen constantly rowing from place to place. A great part of the city stands upon the steep declivity of a very high hill, houses rising above houses like the seats of an amphitheatre. The whole is surmounted by an enormous palace, which Heber thought “as big as five Somerset Houses.” Indeed all the houses that meet the eye are large and many-storied, with a common staircase, and generally a family on each floor; they are chiefly of brick, but universally stuccoed or white-washed. The lower parts of the city, that are built of wood, are masked and concealed by the better portions of it. The faubourgs, or suburbs, stretch up surrounding elevations on the mainland, to the north and south, and consist principally of gardens, elegant houses, and even beautiful edifices. The northern quarter or suburb, called Norrmalm, is exceedingly handsome, and is traversed in its whole extent by the Drottning-Gatan, or Street of the Queen, which is broad, straight, and upwards of half a mile in length. The other streets are generally winding and narrow, and do not permit of a lengthening perspective of the architecture of the houses, which is mostly in good taste.

But it is not from the streets that one can judge of the beauty of Stockholm; it is on the quays by the water-side, and in the large and numerous squares, that the eye embraces the magnificent features of the Swedish capital, with its infinite number of architectural and other decorations. Some of the quays are very noble, and interest at once by the beautiful buildings that flank them and the great commercial activity and bustle of which they are the scene. They are very broad and have upwards of ten fathoms water at their sides. Beyond them the view is generally terminated by the clear waters of the Baltic, or by the quiet and romantic Mälar lake, which winds into the interior of the country to the distance of more than twenty-five leagues. The Slottet, or king’s palace, stands in the city proper, on the elevated summit of the central islet called the Staden, or island of the city. Two bronze lions of a most colossal size stand in front of this vast, simple, and majestic building, which is flanked on one side by a fine terrace and a garden.

Among other treasure the apartments of the palace contain many of the exquisite works of Sergel, the Swedish sculptor, of whom we spoke in our account of Upsala, in No. 287. The chief ornaments of the squares are columns and statues, erected in honour of the national heroes; and these works of art are far more numerous than might be imagined. In the Riddarhus square, among many other public monuments, there



[City of Stockholm.]

is a fine equestrian statue of the great Gustavus Vasa; in the Normalm square an equestrian statue, in bronze, of Gustavus Adolphus; in the Slotsbacken square a beautiful bronze statue, supported on a lofty pedestal of Elfdalen porphyry, of Gustavus III., besides a fine granite obelisk, erected by the latter prince in honour of the burgher militia of Stockholm.

The most interesting church in Stockholm is the Riddarhuskyrken, which contains a great number of tombs, sarcophagi, trophies, and the ashes of a long line of Swedish kings, among whom are Gustavus Adolphus and Charles XII. The exterior of this edifice is exceedingly rich in details and ornaments, without appearing to be overloaded by them. A steeple of prodigious height, but very slender and tapering, shoots boldly up from the midst of a group of small domes or cupolas, that remind the traveller of some of the mosques of Constantinople, and of the Church of San Marco at Venice.

The great arsenal of Stockholm, along with a good deal of worthless trash, contains many interesting objects, and some which are very dear to the military pride of the Swedes. There is a large hall, filled on one side with effigies of the kings of Sweden on horseback, done in wood and wax, and very like (and just as vile as objects of art) the old figures of our kings that used to be in the Tower of London. In other apartments there are prodigious heaps of arms, standards, and other trophies taken by the victorious Swedes from the Danes, Russians, Poles, Saxons, and Austrians. There is a curious boat, said to have been built by Peter the Great, when he was studying the art of ship-building, which was taken by the Swedes on its passage from Saardam. They preserve with scrupulous care the breast-plate, buff-coat, and bloody shirt which Gustavus Adolphus had on when he fell at Lutzen, in 1682; and the famous uniform worn by Charles XII. when he was killed at Fredericshall in 1718. Charles's coat is a coarse blue cloth regimental one, such as was worn by every common soldier. He had round his waist a broad buff-leather belt, in which hung his sword—a plain rapier, almost five feet long. His gloves and boots are remarkably small, and with

other parts of his dress prove the hero to have been a man of very slight make. In the hat there is a hole not more than an inch square, in that part of it which lies over the temple, where the ball penetrated that caused his death. From circumstances attending his fall by night, doubts arose whether the king had not been assassinated by one of his own attendants firing a pistol close to him; and an English traveller thought the smallness of the aperture in the hat conclusive evidence to this effect, "as the hat must have been much more injured by a cannon-shot*." But the gentleman who reasoned in this way forgot that cannons do not always fire large round balls suiting their calibre; and an old Norwegian, who was within the place besieged by Charles, told Mr. Coxe that all sorts of shot were fired against the Swedish trenches, particularly small shot in cartridges from cannon †.

The Admiralty, the Military Academy, the Cabinet of Natural History, and the Senate-house, are interesting objects; and the hospitals and other charitable establishments, together with the manner in which they are administered, are highly honourable to the Swedish government and people. From the inequality of the surface of the rocks on which they are built, some quarters of the town are steep and inconvenient for carriages; nor are the streets of Stockholm in general well paved. There are no flag-stones at the sides for foot passengers.

The numerous passage-boats, which, like the gondolas at Venice, are kept in constant requisition, are all rowed by women. For longer excursions elegant steam-boats are now employed, one or two of which set out every day, during the fine season, with holiday parties to visit the island of Drottningholm, where there is a summer palace of the king, surrounded by woods and gardens. In the immediate neighbourhood of the city there are two public promenades open to all classes, and available alike to those who walk, ride, or drive in carriages. There is a royal palace at each of these favourite spots; the one called Haga, the other Rosendal, or Valley of Roses. The views from the

* 'Tour round the Baltic, &c.,' by N. W. Wraxall, Esq.

† Coxe. Travels in Poland, Russia, Sweden, &c.

latter, which is situated on the left bank of the Salt-Sjön, as the channel of the Mälär is called below Stockholm, are very interesting. In one direction the eye takes in dark forests of pine, in another the bed of the channel, dotted all over with small islands and rocks, of which some are covered with magazines of naval or military stores, and others left in their native rudeness. Where the Salt-Sjön is broad and unimpeded the stream is tranquil and slow, but in the narrow passages between the islands it rushes on rapidly, whitening their rocks with froth and foam. On the whole, few situations can be more romantic than that of this extraordinary town and suburbs.

The present population of Stockholm exceeds 80,000 souls. One of the principal exports is bar-iron, of most excellent quality, the ore of which is procured in the magnificent mines of Danmora, situated between Stockholm and Upsala. Between 30,000 and 40,000 tons of these bars are sent annually to England and other countries.

THE TINKERS OF SCOTLAND.

THE tinkers, or *cairds*, of Scotland are a race closely similar to the gipsies of England; and may be termed, in the language of the zoologists, a variation, produced by climate, &c. Their staple profession is that of itinerant braziers, manufacturers of wooden utensils, horn spoons, &c. To this, however, they add that of being dexterous poachers, daring thieves, and sturdy mendicants, according as opportunity serves. In former times, when society was in a comparatively rude state, and intercourse was less frequent than it is now, the daring and wildly-adventurous spirit which they often evinced threw a shade over their more noxious qualities; and the "gudewife" of the remote farmhouse frequently not only tolerated but welcomed their visits, for the sake of having her pots, pans, "leglins," and "bickers" repaired, even though conscious that her poultry or goods might be laid under contribution.

Burns introduces in his 'Jolly Beggars' a "sturdy caird," who is armed with a "rusty rapier;" the character is delineated with great spirit. But Sir Walter Scott has embodied what may be termed the *poetry* of the character in his 'Donald Caird.' As the song illustrates some customs of a past age, and exhibits all the rude features of a daring and adventurous gipsy, it is given here:—

DONALD CAIRD.

"DONALD CAIRD can lilt and sing,
Blithely dance the hieland fling;
Drink till the gudeman be blind,
Fleech till the gudewife be kind;
Hoop a leglin, clout a pan,
Or crack a pow wi' ony man;
Tell the news in burgh and glen,
Donald Caird's come again!
Donald Caird's come again!
Donald Caird's come again!
Tell the news in burgh and glen,
Donald Caird's come again!

Donald Caird can wire a maukin*,
Kens the wiles o' dun deer staukin;
Leisters kipper†, maks a shift
To shoot a muirfowl i' the drift;
Water-bailiffs, rangers, keepers,
He can wank when you are sleepers;
Not for bountith or reward,
Dare ye mill wi' Donald Caird!
Donald Caird, &c., &c.

Donald Caird can drink a gill
Fast as hostler-wife can fill,
Ilka ane that sells gude liquor
Kens how Donald bends a bicker:

* "Maukin," a hare.

† "Leisters kipper;"—a *leister* is a three-pronged fork, and *kipper* is salmon.

When he's fou, he's stout and saucy,
Keeps the cantle o' the causey*;
Hieland chief and lowland laird
Maun gie room to Donald Caird.
Donald Caird, &c., &c.

Steek the amrie‡, lock the kist‡,
Else some geer may weel be mist.
Donald Caird finds orra things
Where Allan Gregor "fan' te tings§;"
Dunts of kebbuck, taits of woo' ||,
Whiles a hen, and whiles a sow,
Webs or duds frae hedge or yard—
'Ware the wuddie¶ Donald Caird!
Donald Caird, &c., &c.

On Donald Caird the doom was stern,
Craig to tether, legs to airn;
But Donald Caird, wi' mickle study,
Caught the gift to cheat the wuddie;
Rings of airn, and belts of steel,
Fell like ice frae hand and heel!
Watch the sheep, in fauld and glen,
Donald Caird's loose again!
Donald Caird, &c., &c."

* "Cantle o' the causey,"—centre of the street, or raised causeway; the keeping or maintaining of which was equivalent to the former London practice of disputing "the wall."

† "Amrie," larder.

‡ "Kist," large chest.

§ Highland pronunciation for "found the tongs," a proverbial expression for *finding* things before they are lost. The Highlander "found the tongs" at the fire-side.

|| "Dunts of kebbuck, taits of woo',"—pieces of cheese, parcels of wool.

¶ "'Ware the wuddie,"—beware of the gallows.

But the tinker, as delineated in this song, may be said to have gone completely out. The change in the circumstances of social life has lessened, if not destroyed, the value of their services in their ostensible profession; while their vagabond propensities render them a pest to the country, as may be seen by the following extract from Mr. Hill's 'Report on the Prisons of Scotland.'

"In Scotland, the district, on the inhabitants of which the cost of imprisoning an offender falls, is generally so small, that, as regards the pecuniary advantage of the little community affected, it is often better to allow the offender to escape altogether, or with a very slight punishment, rather than incur the expense of his imprisonment for a sufficient time to afford opportunity either for working his reform, or for establishing such a wholesome fear of a second imprisonment as will be likely to deter him from committing a new offence. Thus, when any of that numerous tribe of vagabonds called tinkers in Scotland (corresponding in their mode of life with gipsies in England), enter a town, and commit petty thefts or depredations, the common practice is to arrest them and lock them up for the night, and in the morning to conduct them safely beyond the boundaries of the parish. This is done in the hope that their next offences will not be committed in that particular town or village, although with a slender prospect of a like immunity for the places in the neighbourhood."

"On questioning the superintendent of police at Montrose respecting these and other wandering offenders who pass through his hands, he told me, that although they are always led out of the town, and he often loses sight of them for a considerable time, yet, after a certain period, most of them come back again; and that, in point of fact, it is seldom that any one is taken up whom he does not remember to have had in custody before. They appear, indeed, to make a circuit through a large district of the country, and from time to time to appear again at the same places. At a rude guess, the superintendent thought there were about 100 of these people who pass through Montrose; and by the time the last in the chain had left the town in one direction, the first has completed his tour and is ready to enter from the other.

“Of course, it would not be a profitable employment of their money for the inhabitants of the small town of Montrose, for the sake of securing themselves from their share of the injury and annoyance caused by these vagabonds, to take measures for their permanent cure or withdrawal from society; although the cost of such measures would be trifling when compared to the whole amount of injury which these people cause to the inhabitants of the entire district through which they are constantly wandering.

“The thefts and depredations committed by the Scotch tinkers are not always of a petty kind. I heard many complaints against them, particularly in Forfarshire, where their numbers appear to be increasing. I was told that many farmers and persons residing in retired places often find it their wisest plan to overlook many thefts and depredations rather than bring the hostility of the gang upon them by sending for the police, a force which, in the rural districts, is often very inefficient. A country gentleman, living near Arbroath, told me, that having sent his servants to order a party of tinkers, who had been committing some offence upon his grounds, (stealing his poultry, if I recollect rightly,) to leave the neighbourhood, they coolly sent him back word that they should remain where they were; but that if he would give them only half the money that it would cost to send for the police-officers to drive them away, they would remove immediately.

“On my reaching Forfar, and going to the gaol, I found the keeper was from home; and on inquiring where he was, I was told that he had been called upon to join the town officers to go after a party of about forty tinkers, who had been deliberately pulling down a gentleman's corn-stack, and carrying away the grain.

“The tinkers are ever ready to adopt the character of thief or beggar, as circumstances may suggest. If, on going to a farmhouse as humble mendicants, they find that there are none but females about, they often assume a bolder mien, and order the farmer's wife to give them a ham, or anything else they may see hanging in the room.

“Under the circumstances I have described, it is of course very important that vigorous measures should be taken for the apprehension and adequate punishment of these bands of rogues. And that this has not hitherto been done, may, I think, be in part ascribed to the fact, that the interests of the people of Scotland have not been united and concentrated in the punishment of offenders.”

Institutions for Apprentices.—From a little pamphlet entitled ‘Hints for improving the Societies and Institutions connected with Education and Science in the town of Wolverhampton,’ by the Rev. G. Oliver, D.D., we have slightly abridged the following outline of an institution for apprentices:—“When boys are of age to be placed out apprentice, I would then recommend an intermediate institution to be established in the room of the Mechanics' Library, for the sole and exclusive use of boys from the age of fourteen to twenty-one; at which period, with the preparation which I am about to advise, they might be admitted into the Mechanics' Institution. This institution for apprentices should contain a library of elementary books of all kinds, to induce the youths to devote their evenings to reading; and I would have a simple and cheap philosophical apparatus, consisting of an electrical machine, an air pump, a concave mirror, a magic lantern, a pair of twelve-inch globes, a telescope, a small orrery, a camera obscura, a few stuffed specimens of natural history, and fossils, collected in the neighbourhood, with a few retorts, &c., as a chemical laboratory, all of which may be procured at a trifling expense; and weekly lectures should be delivered to the young men by intelligent members of the higher institution, taking some sound author as a text book, who by such means would advance their own scientific knowledge, for it is an old axiom ‘that by teaching we learn.’ A thousand amusing experiments might be introduced, which would prove highly attractive

to persons of that age; and after a few nights there cannot be a doubt but the lecture room would be crowded. The prevailing subjects would of course be practical mechanics connected with the trade of the town, in illustration of which would be explained the principles of the steam-engine, railroads, canals, machinery of every description, chemistry, as employed in the smelting of iron, the production of japan varnishes, &c., and these would branch out into every department of experimental philosophy. Nor should a competent knowledge of natural history be overlooked, to impress upon the mind a constant sense of the power and goodness of God, as exemplified in the wonders of the Creation. Dr. Knox observes, with his usual acuteness,—‘There is no necessity to ask, *cui bono?* what good will learning do me? The gaining of learning is to be compared to the gaining of money, as Gesner says. A man does not say or know to what purpose every shilling he gains shall be applied. No; he joyfully takes the gain, and adds it to the common stock, and thus at last he becomes rich; so in acquiring learning, he gains all he can, and becomes learned. I remember a young man at the University, who refused to attend lectures in Euclid's Elements, because he was a man of fortune and never likely to become a carpenter! His understanding was too narrow to conceive the utility of geometry, &c., in strengthening the reasoning powers, and advancing science.’ It would not be amiss if there were hung on the walls of the lecture room a good set of Hogarth's ‘Industry and Idleness,’ on which periodical lectures might be given to the apprentices, to enliven their other pursuits; and I cannot but think the most beneficial effects would result; for the practical morality which this great allegorical painter has embodied in the series, equals anything which has been accomplished by man within the same compass.”

LEAD MINES IN BRITAIN WORKED BY THE ROMANS.

BRITAIN remained a province of the Roman empire for nearly 500 years. The first invasion of Cæsar was in the autumn of the year 55 B.C. The final withdrawal of the Roman troops from the island is dated about A.D. 420, though this is disputed, and some authors place it nearly a century later.

Taking it at 500 years, what a long period of time is this! Five hundred years from the present moment will carry us back to about the commencement of the reign of Edward III. Let the reader reflect on the great changes, social, moral, and political, which have occurred since then. Yet take the two equal periods of 500 years each, and compare them together as to the amount of materials which they supply for history—that is, satisfactory and authentic history. The one can be given in a few pages, the other will fill volumes.

A considerable portion—in fact almost all—of the history of the Roman occupation of Britain is taken up by accounts of the occasional struggles of the natives with their masters. We have scarcely any particulars of what the Romans did for the social improvement of the people. Great changes were, however, effected; and “although the Roman Conquest does not appear to have led to such high cultivation of the intellect as in some other provinces, and Roman Britain can produce no literary name; while Gaul, and especially Spain, can boast of several: yet great improvements resulted from their dominion. They carried roads across the island in various directions, as appears from the Itinerary of Antoninus, and from existing remains; dug canals, raised embankments against the sea, and the high tides in the great æstuaries; and there arose under their dominion many towns, some of considerable importance, and endowed with various gradations of privilege*.”

In the seventh room of the Gallery of Antiquities in the British Museum are several pigs or masses of lead, one of which has the name of the Emperor Domitian inscribed upon it, a second that of the Emperor Hadrian,

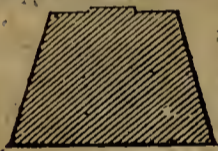
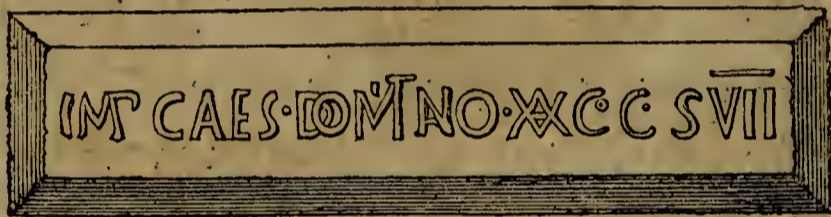
* ‘Penny Cyclopædia,’ vol. v. p. 447.

and a third the name of a private individual. These masses of lead have been found in different places of England. The following particulars respecting them are taken from the second volume of 'The Townley Gallery,' in the 'Library of Entertaining Knowledge.'

"These pigs, or oblong masses," says the author, "afford undoubted evidence that the lead-mines of Derbyshire and its neighbourhood were worked in the Roman time. The inscriptions also which they bear, usually indicating the emperor in whose time the metal was obtained, confirm the testimony of Pliny, who says, that, in 'Britain, lead is found near the surface of the earth in such abundance, that a law is made to limit the quantity which shall be taken.' It was therefore necessary, in the royal mines, to mark the lead with the emperor's name. In a few instances, such pigs apparently bear the name of a private proprietor, but all show that the article was under fiscal regulation,—a regulation which accounts for the form in which the lead was cast: the inscription, and sometimes a border which surrounds it, always covering the upper area of the piece to its full extent.

"The mines of Britain, in the earlier part of the Roman time, were worked by the subdued natives. Galgacus, in his memorable speech, preserved by Tacitus, when laying before his soldiers the consequences of defeat, mentions tributes, MINES, and the rest of the penalties of slavery."

The following is a representation of the pig of lead in the British Museum, which bears the name of the Emperor Domitian—

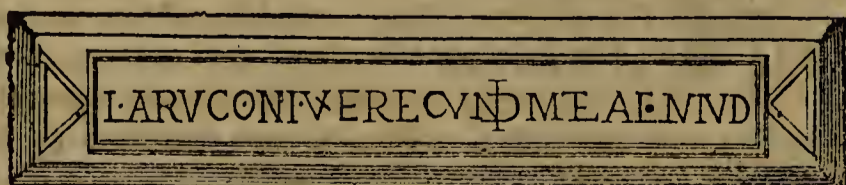


[Transverse Section.]

It is 23 inches in length at the bottom; 20 upon the upper surface; in depth of lead, four inches; and weighs 154 lbs. It was discovered in the year 1734, a foot and a half under ground, upon Hayshaw Moor, in the parish of Ripon, in the West Riding of Yorkshire. It was bequeathed to the British Museum by Sir William Ingilby, Bart., and presented by his executors in 1772.

The inscription reads—"IMP. CAES. DOMITIANO. AVG. COS. VII.," contractions for "Imperatore Cæsare Domitiano Augusto, Consule VII.," being the name and title of the Emperor Domitian, and the date of the seventh year of his consulate. This inscription is referred to the year 81: for although Domitian held his seventh consulate in the year 80, yet, as he is here styled Augustus, the inscription must refer to the year 81, in which he succeeded to the empire upon the death of his brother Titus, and took the office of consul for the eighth time in the following year.

In 1797 three pigs of lead were presented to the Museum, of one of which the following is a representa-



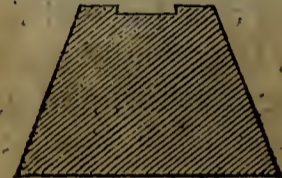
[Section.]

tion. The inscription is difficult to read, and is not

given with full accuracy in the engraving, in consequence of the compound and confused manner in which the letters run into each other.

The following is the accurate reading of the inscription:—"L. ARVCONI. VERECVND. METAL. LVTVD." There has been some dispute amongst antiquarians as to the meaning of this inscription. The last word, "LVTVD.," is understood to be a contraction for Lutudarum, a Roman station, supposed to have occupied the site of the present town of Chesterfield—and which appears to have been, in the Roman time, a little emporium for the mining-district of Derbyshire. The whole inscription is conjectured to mean—"Lucii Aruconii Verecundi Metallum Lutudarense,"—Lutudarian metal, (the property) of Lucius Aruconius Verecundus.

The inscription on the pig of lead represented in the following wood-cut is simply that of the name and title of the Emperor Hadrian:—



[Transverse Section.]

Its greatest length is 22 inches by 7; the upper surface 19 by 3½; and the weight 191 lbs. It was found in the neighbourhood of a farm called Snailbeach, ten miles south-west of Salop.

The author of the 'Townley Gallery' concludes his account of these pigs of lead by the following brief remark:—"The occupation of the British mines by the Romans was probably more extensive than most readers are aware of." It is certainly best to be brief when we have little more than conjecture to go upon; yet when curiosity is aroused, we are strongly tempted to speculate on a variety of particulars connected with the subject. We would like to know the precise mode of operation in managing the mines, the nature and extent of the traffic in the metal, the probable numbers of the miners, and other statistical details. Such a subject becomes far more interesting, when we consider that the country thus treated as a distant colony, and whose fierce and barbarous inhabitants were condemned to toil in what they deemed most degrading and ignoble occupations, is now the governing centre and head of a greater empire than Rome ever saw, and claims colonies yielding products, the existence of which were alike unknown to her. If Agricola, when he finally defeated Galgacus on the Grampian Hills, or his son-in-law, Tacitus, when writing his history, could have looked down through the 1800 years which have almost elapsed, and contemplated Britain as she now is, it would indeed have appeared to them a "scene surpassing fable, and yet true."

It is stated that the Roman method of cleansing the lead ore was the same as that pursued in this country till very recent times. The lead of Derbyshire was originally smelted by wood fires on hills in the open air. This inconvenient mode was succeeded by what were called hearth-furnaces. The last hearth-furnace was pulled down about the year 1780, the cupola furnace having succeeded in its room.

* * * The Office of the Society for the Diffusion of Useful Knowledge is at 59, Lincoln's Inn Fields.

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THE WINE-MARKET AT PARIS.



[Halle aux Vins, Paris.]

THE words "halle" and "marché" are often applied in an indiscriminate manner, but there exists a difference between their true import which it may be useful to observe. A *halle* is a place of depôt for merchandise, where it is at the same time stored for consumption and exposed for sale; and it is of course sheltered from the elements. A *marché*, on the other hand, is an open space of ground where articles are not stored, but merely brought for immediate sale. When the business of the day is over the *marché* is a vacant space, while the *halle* still contains its stores. Thus the spot where butter, eggs, fish, or vegetables are brought for sale is, properly speaking, a *marché*, while the appointed public place where flour, cloth, or wine are constantly kept on sale is a *halle*. The Halle aux Vins, or wine-market, is one of the most complete and best arranged of any of the places in Paris for the accommodation of merchants and traders. It is situated within the walls of the capital, at its eastern extremity, beyond the Jardin des Plantes. The inconvenience of the old Halle aux Vins, established in 1656, had long been felt; but the first stone of the present market was not placed until the 15th of August, 1813, when the Empire was in its wane. At first the works were actively carried on, but political disasters occasioned them

to be suspended, and they were not completed until several years after the Restoration. It fronts the river. The piles of magazines are seven in number, four in front and three behind. The two centre piles in the front are divided into seven compartments, and are used as a market. One of the buildings in the back division is of large dimensions for containing brandies. The buildings are neat and commodious, and a part of them are surrounded by a terrace. The space between the several masses forms a sort of street, of which there are several, named after different kinds of wine—as the Rue de Champagne, Rue de Bourgogne, Rue de Bourdeaux, Rue de Languedoc, Rue de la Côte d'Or. This latter street, which is represented in the engraving, is the finest, and extends the whole length of the *halle*. There are counting-houses for the merchants, and small *bureaux* for the officers who superintend the entrance and delivery of the wines. A duty of ten-pence is paid on each cask, and the number of entries sometimes amounts to 1500 a-day. France can boast of the simplicity of its system of weights and measures, but, as in this country, improvements are often obstructed by local customs; and in the *halle* there is a *bureau de dépotage*, containing measures of the casks in use in different parts of France, and here purchasers can have

their casks gauged. The Halle aux Vins contains 325,000 square yards, enclosed by walls on three sides, and separated on the side towards the Seine by an iron railing 889 yards in length*. The buildings were calculated to contain 400,000 casks, though in making this estimate it was thought there would only be one row of casks above the ground-floor; but the manner in which the constructions were completed renders it probable that they will hold from 600,000 to 800,000 casks.

The consumption of wine and spirits in Paris is under 20,000,000 gallons a year, and the halle probably contains sufficient for the consumption of eight or nine months, or 12,000,000 or 15,000,000 gallons. The quantity of wine and foreign spirits in warehouse under bond in London, when compared with the consumption, exceeds the proportion contained in the halle at Paris; for in England 50 gallons of ale or porter are drunk to one gallon of wine and three-fourths of a gallon of foreign spirits, while in Paris for every 50 gallons of beer which is drunk there are above 160 gallons of wine. But notwithstanding this difference in the relation of the articles consumed, the stock of wine in the docks of London is 4,500,000 gallons; and of foreign spirits there is more than nine months' consumption for the whole of the three kingdoms, the quantity in bond exceeding 3,600,000 gallons, making the total amount of wine and foreign spirits in bond in London upwards of 8,000,000 gallons. If to this be added the stock in the hands of the dealers, the total quantity of wine and foreign spirits may be taken at 12,000,000 gallons in London alone. The relative consumption of wine and beer in France being as three to one, the quantity of wine stored in Paris should be three times as great as in London. It is true that the stock taken into the Halle aux Vins is consumed in Paris, while that in bond in London is partly destined for the general consumption of the country; but in England, exclusive of the quantity in London, the wine in bond exceeds 7,500,000 gallons, being considerably more than one year's consumption for the three kingdoms; and in the hands of the dealers there is also sufficient in hand for a year's consumption. The foreign spirits in bond in England, exclusive of London, amount to nearly 6,500,000 gallons, and nearly 2,000,000 gallons are in the dealer's hands, which makes a total of 8,500,000 gallons, or two years' consumption for the United Kingdom. The supply beforehand of wine and foreign spirits amounts altogether to about 22,000,000 gallons; and if it were possible to estimate the stock in the cellars of private individuals, perhaps the total quantity ready to be consumed would not be less than 30,000,000 gallons. Wine is consumed at the rate of 6,500,000 gallons a year; and of foreign spirits the consumption is about 4,800,000 gallons a year, so that the country contains sufficient for three years' consumption. This vast accumulation of stores, consisting of luxuries which are none of them the production of the country, affords a strong proof of the unexampled extent to which commerce brings to our doors, and enables us to command, the richest produce of every clime. It should never be forgotten that it is to industry we are indebted for the comforts and luxuries which minister to our wants and enjoyments. With a soil less productive than that of other countries, with fewer of those advantages of climate which co-operate with man in his exertions to obtain plenty, the people of England acquire, by their ingenuity and superior habits of industry, a greater share of the best productions of the earth than any other nation.

Short-sighted views have sometimes counteracted the full enjoyment of the results of industry; but every day their influence is becoming less and less predomi-

* An extraordinary elevation of the waters of the Seine during the present month has occasioned the Halle aux Vins to be inundated.

nant. The proportion in which the wine of different countries is at present consumed may be alluded to as a remarkable and striking example of the consequences of diverting the natural channels of commerce. The trade of France, it is remarked, is of less importance to this country than the trade with China. With greater capabilities of supplying wines of a superior quality for an extensive consumption than any other country in Europe, our actual consumption of French wines is utterly insignificant. The average consumption of Bordeaux wines in England is twenty-four times less, in proportion, than in Holland and Belgium. It has often been said that the lighter wines of France are not adapted to our climate, but Denmark, a much colder country than England, with a population of 2,000,000, consumes nearly as large a quantity of the wines of France as the United Kingdom with a population twelve times greater. France exports one-eighty-eighth part of her annual produce of wine, or 22,000,000 gallons, worth on an average 11s. per gal., or 2,000,000*l.* England consumes only one-seventy-seventh part of the quantity exported; and the quantity annually produced in France is nearly 3000 times greater than the quantity exported to the United Kingdom. The finest wines of France are produced in the department of the Gironde, and the annual supply is from 50,000,000 to 60,000,000 gallons, being about ten times the consumption of wines of every kind by the population of the United Kingdom, and above 200 times the quantity of French wines which they consume. The proportion per cent. of the different kinds of wine consumed in the United Kingdom in the following years will be seen from the annexed table:—

	1820 to 1824.	1825 to 1830.	1831* to 1832.	1835.
Portugal	50.9	47.	43.7	43.3
Spanish	21.8	28.2	34.3	34.6
Cape	11.5	9.2	8.7	8.1
French	3.6	5.7	4.	4.2
Madeira	7.2	4.1	3.	2.4
Other wines	5.	5.8	6.3	7.4

The quantity of foreign wines retained for home consumption in 1835 was as follows:—Portugal, 2,780,024 gallons; Spanish, 2,230,187; Cape, 522,941; French, 271,661; Madeira, 154,433; other wines, 476,017—total, 6,420,342 gallons. Four-fifths of the wine consumed is from Spain and Portugal. Dr. Bowring remarks, in his 'Second Report on the Commercial Relations between France and Great Britain,' that "the fluctuations of the demand for the wines of France in England is one of the most remarkable proofs which commercial history furnishes of the manner in which taste and habit become subservient to the fiscal regulations of the tariff. From the Norman Conquest downwards, the wines of France were the principally imported beverage of England; a very natural result of their adjacency, and the consequent facility of introduction. In 1669, it appears that the consumption of French wines was two-fifths of the whole importation into England. In 1830 it was only one-twenty-third part." In 1693, the first distinction was made in the duties of French and other wines by an increase of 8*l.* per ton; in 1697 the difference was increased to 25*l.* per ton. In 1703 a treaty was negotiated by Mr. Methuen, known as the "Methuen Treaty," by which we bound ourselves to the Portuguese to charge one-third higher duties on the wines of France than was charged on those of Portugal. The Portuguese, on the other side, bound themselves to admit our woollens in preference to those of any other country at a fixed and invariable rate of duty. This treaty was considered at the time as a brilliant specimen of diplomatic talent; but it gave a monopoly to 2,000,000 of people at

* The duties were equalized in 1831, the duty on French wines having been reduced in 1819. The prevalence of the cholera in 1831-32 occasioned a diminished consumption of French wines.

the risk of injuring the trade with 25,000,000. Our woollens, if they were intrinsically better than those of any other country, would have found their way into the Portuguese market without the sale being forced by so heavy a bonus; and besides, our conduct lost us the French market. Hume, in his 'Balance of Trade,' in reply to the question as to the gain which had accrued from this wise bargain, says, "We lost the French market for our woollen manufactures, and transferred the commerce of wine to Spain and Portugal, where we buy much worse liquor at a much higher price." This is the cause why our trade with France, which might be so great, is of less value than that which we carry on with the Portuguese; a people not only in poorer circumstances, but ten times less in numerical amount than the population of France. The evils of this unfortunate course do not stop here. France, in order to retaliate upon us for the attempt to cripple her trade in the great article which she produces, has fixed heavy duties upon our manufactures. Both countries have therefore suffered. England has lost a market for her manufactures and France a customer for her wines. The folly of England seems in this respect to have exceeded that of France, but the latter country has suffered most severely. In fifty years the population of France has increased 32 per cent., and the quantity of land planted with the vine has increased only 28 per cent. Dr. Bowring remarks, in his 'Report' already quoted, "Notwithstanding the almost unrivalled excellence of the wines of France, and the great aptitude of the country for their increased cultivation, the accumulation of wealth in France has added nothing to the consumption of an article which it would be naturally supposed to influence most sensibly; nor has the enormous increase of the wealth of England, the United States, or any other country, produced the slightest advantages to France in that branch of industry which would seem capable of almost boundless development. * * * *

The principal cause of this state of things is to be found in the prohibitory system of France, which has diverted the capital of France from the objects in which her superiority is undoubted, and to those where her inferiority has been most signally demonstrated. Her wines would have been bought by other nations, but the tendency of her commercial policy has been to produce what other nations would not buy." The consequence is that an immense quantity of stock has accumulated in the hands of the vine-growers, and the price has been brought down to an unnatural extent. The proprietors of vineyards in the department of the Mouths of the Rhone, in a memorial which they addressed in 1828 to the Chamber of Peers, stated their case in the following striking manner:—"Our prices are fallen 40 per cent. Our cellars are overflowing, and to whom should we sell? To the North? We prohibit its hemp and its iron. To Russia? We prohibit its wheat. To Piedmont? We prohibit its rice and cattle. To the Netherlands? We prohibit their woollens." The wine-growers of the Gironde, in 1789, exported a larger quantity of wine than is now exported by the whole of France. They state that their distress has been occasioned by the high duties imposed on foreign iron, linen, hemp, and cattle in 1822. The iron duty was raised from 12s. to 20s. per 325 lbs. The wine-growers of France, with those dependent on them, consist of about 6,000,000 individuals, and they represent a capital of 28,000,000*l.*, while the iron-masters employ 70,000 labourers, and do not produce so much as 3,000,000*l.* a-year; more than one-third of which is raised at the cost of other interests. The wine-growers of the Rhone have been compelled to sell their wine at $\frac{1}{2}$ *d.* per bottle, and those of the Moselle at less than 1 $\frac{3}{4}$ *d.* per gallon. The vine grows in a sterile soil,

and the lands now under cultivation cannot be profitably diverted to any other culture. One of the happiest and most natural means of increasing the riches and resources of the country is thus set at nought, and under such a system the gradual impoverishment of the wine districts cannot be prevented. The Treaty of Methuen, after having existed considerably more than a century, has been abrogated within the last few years, and the duty on French wines is now the same as the duty on the wines of any other country. It will be long, however, before public taste is acted upon by this alteration; for the duties on all wines are still much too high to allow wine to be used except by the opulent.

IMPROVEMENTS IN FOOD, CLOTHING, AND LODGING IN GREAT BRITAIN.

(Abridged from M'Culloch's 'Statistical Account of the British Empire.')

THE comforts of all classes have been wonderfully augmented within the last two centuries. The labouring orders have, however, been the principal gainers, as well by the large numbers of them who have succeeded in advancing themselves to a superior station, as by the extraordinary additional comforts that now fall to the share even of the poorest individuals. From the age of Henry VII., improvement in England has, a few short intervals only excepted, been uniformly progressive; and since 1760 its advance has been rapid beyond all former precedent. Without going farther back, we may mention, in proof of the disorderly and wretched state of the population in the early part of the sixteenth century, that Harrison tells us that 72,000 "great and petty thieves were put to death during the reign of Henry VIII." This account of the disorderly state of the kingdom, at the period in question, is corroborated by a statement preserved by Strype, written by an eminent justice of Somersetshire, in 1596, wherein it is stated that "forty persons had been executed (in that county) in a year, for robberies, thefts, and other felonies; 35 burnt in the hand; 37 whipped; 183 discharged; that the rapines committed by the infinite number of wicked, wandering, idle people were intolerable to the poor countrymen, and obliged them to a perpetual watch of their sheepfolds, pastures, woods, and corn-fields: that the other counties of England were in no better condition than Somersetshire; and many of them were even in a worse: that there were, at least, 300 or 400 able-bodied vagabonds in every county, who lived by theft and rapine, and who sometimes met in troops to the number of sixty, and committed spoil on the inhabitants; that if all the felons of this kind were reduced to good subjection, they would form a strong army; and that the magistrates were awed, by the associations and the threats of confederates, from executing justice on the offenders."

These disorders were partly, no doubt, occasioned by the dissolution of the monasteries, the consolidation of small farms, and, more than either or both of these causes, by the depreciation of the value of money, caused by the discovery of the American mines, and the enfeebling of the standard by Henry VIII. But, independently of the accidental circumstances now adverted to, the condition of the great bulk of the people in the sixteenth century was the most depressed imaginable. "The bread throughout the land," says Harrison, who wrote in the reign of Elizabeth, "is made of such graine as the soil yieldeth; nevertheless the gentilitie commoulie provide themselves sufficientlie of wheat for their ownè tables, whilst their household and poore neighbours, in some shires, are inforced to content themselves with rie or barleie; yea, and in time of

* The authorities and references which are given by Mr. M'Culloch are omitted in this abridgment.

dearth, many with bread made either of bran, peason, or otes, or of altogether, and some acorns among; of which scourge the poorest doe soonest tast, sith they are least able to provide themselves of better. I will not saie that this extremitie is oft so well to be seene in time of plentie as of dearth; but if I should I could easily bring my triall."

Sir F. M. Eden, whose elaborate researches have thrown much light on this subject, truly states that the substantiality of diet, for which the sixteenth century is renowned, was confined chiefly to the tables of persons of rank. "A maid of honour, perhaps, breakfasted on roast beef; but the ploughman, in these good old times, as they are called, could, I fear, only banquet 'on the strength of water gruel.'"

But if their provisions were coarse and deficient, their clothing and lodging were incomparably more so. The houses, even of the rich and the great, were, in the sixteenth century, mostly destitute of glass windows; and the cottages of the poor were not only universally without them, but also without chimneys! The luxury of a linen shirt was confined to the higher classes. The cloth used by the bulk of the people was mostly of home manufacture; and, compared with what they now make use of, was at once costly, coarse, and comfortless. All classes, from the peer to the peasant, were universally without many articles, the daily enjoyment of which is now deemed essential even by the poorest individuals. Tea and coffee were then wholly, and sugar almost wholly unknown; and notwithstanding all that is said of the rude hospitality, and of the consumption of ale and beer in these remote times, it is abundantly certain that the labouring classes consume at this moment ten times more malt liquor than their ancestors ever did in either the fifteenth or the sixteenth century.

The superior condition of the people in our own times over that of their ancestors in the periods alluded to above, is indeed too obvious to be disputed by any one acquainted with the facts. But their superior condition at the present moment, as compared with their condition a century ago, or in the reign of George II., may not, perhaps, be so generally admitted. In point of fact, however, the progress of improvement since the middle of last century has been even more rapid than at any former period. It will not be difficult to demonstrate this.

Mr. Charles Smith, the well-informed author of the tracts on the corn trade, estimated that of the 6,000,000 of people in England and Wales, in 1760, not fewer than 888,000 fed on rye. But at present we are quite sure there are not 20,000 who use that species of grain. The rye eaters have universally almost been changed into wheat eaters; and, except in the county of Durham, where a mixture of wheat and rye, called maslin, is grown, the culture of rye is almost unknown. Nearly the same may be said of the consumption of barley. In the northern counties of England, at the middle of the last century, and for long after, very little wheat was used. In Cumberland, the principal families used only a small quantity about Christmas. The crust of the goose-pie, with which every table of the county is then supplied, was, at the period referred to, almost uniformly made of barley-meal. But no such thing is now ever heard of, even in the poorest houses. Almost all individuals use wheaten bread, at all times of the year. It is, in fact, the only bread ever tasted by those who live in towns and villages, and mostly, also, by those who live in the country.

It has been the same every where throughout the kingdom. In Cornwall, from thirty to forty years ago, the small farmers, with the agricultural labourers, and those employed in the mines, almost invariably used barley; but at present they do not use it to any thing like the same extent as formerly, and in many extensive

districts it has been entirely abandoned. The same thing has happened in Somersetshire, and in every other county where either barley or oats was formerly made use of. Wheat is now the all but universal bread-corn of England; and in some of the manufacturing towns, within the last few years, the use of the inferior sorts of wheaten bread has been a good deal restricted; and is rejected, indeed, by all but the very lowest and poorest classes.

The change that has taken place during the last half century, in the consumption of butcher's meat, is still more extraordinary than that which has taken place in the consumption of corn. The quantity made use of has been wonderfully increased, and its quality signally improved. From 1740 to about 1750, the population of the metropolis fluctuated very little; amounting, during the whole of that period, to about 670,000 or 675,000. Now, during the ten years ending with 1750, there were, at an average, about 74,000 head of cattle, and about 570,000 head of sheep sold annually in Smithfield market. In 1831, the population had increased to 1,472,000, or in the ratio of about 218 per cent.; and at an average of the three years ending with 1831, 156,000 head of cattle, and 1,238,000 head of sheep were annually sold in Smithfield; being an increase of 212 per cent. on the cattle, and of 217 per cent. on the sheep, as compared with the numbers sold in 1740-50. It consequently appears that the number of cattle and sheep, consumed in London, has increased, since 1740, about in the same proportion as the population. The weight of the animals has, however, a good deal more than doubled in the interval. In the earlier part of last century, the gross weight of the cattle sold at Smithfield did not, at an average, exceed 370 lbs., and that of the sheep did not exceed 28 lbs.; whereas, at present, the average weight of the cattle is estimated at about 800 lbs., and that of the sheep at about 80 lbs. Hence, on the most moderate computation, it may be affirmed that the consumption of butcher's meat in the metropolis, as compared with the population, is twice as great at this moment as in 1740 or 1750.

In most other parts of the country there has been, at least, a corresponding increase in the consumption of butcher's meat; the above statements apply only to the changes that have taken place in the condition of the people of England and Wales; but the change that has taken place in Scotland since the beginning and middle of last century has been still more striking and extraordinary. At the periods referred to, no manufactures, with the exception of that of linen, had been introduced into Scotland. Its agriculture was in the most wretched state imaginable; and the inhabitants were miserably supplied, even in the best years, with food, and were every now and then exposed to all the horrors of famine.

The details already laid before the reader, have shown the extreme prevalence of outrage and disorder in England in the sixteenth century; but Scotland was a prey to the same sort of disorders so late as the end of the seventeenth and the beginning of the eighteenth centuries. In one of the Discourses of the celebrated Scotch patriot, Fletcher of Saltoun, written in 1698, we find the following statement:—

"There are at this day in Scotland (besides a great many poor families, very meanly provided for by the church boxes, with others who, by living on bad food, fall into various diseases) 200,000 people begging from door to door. And though the number of them be, perhaps, double to what it was formerly, by reason of this present great distress, yet in all times there have been about 100,000 of those vagabonds, who have lived without any regard or subjection either to the laws of the land, or even those of God and nature. They are not only a most unspeakable oppression to poor tenants

(who if they give not bread or some kind of provision, to perhaps forty such villains in one day, are sure to be insulted by them), but they rob many poor people who live in houses distant from any neighbourhood."

We suspect there must be some exaggeration in this striking paragraph; but the intelligence and good faith of Fletcher are unquestionable; and there cannot be the shadow of a doubt that the disorders to which he refers were of long standing, and upon the most gigantic scale. To introduce good order and industry, he did not scruple to recommend the establishment of a system of predial slavery, to which the vagabonds in question and their children should be subjected!

The establishment of schools and of a more vigorous and impartial system of government, happily succeeded in repressing these disorders. But the people of Scotland continued, till a comparatively recent period, without manufactures or trade, and were involved in the extreme of misery and destitution. The following authentic paragraph, extracted from the statistical account of the parish of Meigle in Strathmore, contributed by the late Rev. Dr. Playfair, of St. Andrew's, may be considered as applying to the whole surrounding district:—

"Since the year 1745, a fortunate epoch for Scotland in general, improvements have been carried on with great ardour and success. At that time the state of the country was rude beyond conception. The most fertile tracts were waste, or indifferently cultivated. The education, manners, dress, furniture, and tables of the gentry were not so liberal, decent, and sumptuous as those of ordinary farmers are at present. The common people, clothed in the coarsest garb, and starving on the meanest fare, lived in despicable huts with their cattle. "The produce of the farm was barely sufficient to enable the tenant to pay a trifling rent and servants' wages, and to procure for his family a scanty subsistence."

In the Highlands the situation of the inhabitants was, if possible, worse. The writer of the statistical account of the united parishes of Lochgoilhead and Kilmorish, in Argyleshire, referring to the state of the people about 1760, observes:—

"Indolence was almost the only comfort they enjoyed. They often felt what it was to want food. The scanty crops they raised were consumed by their cattle in winter and spring; for a great part of the year they lived wholly on milk, and even that, by the end of the spring and the beginning of summer, was very scarce. To such an extremity were they frequently reduced, that they were obliged to bleed their cattle, in order to subsist some time on the blood (boiled); and even the inhabitants of the glens and valleys repaired in crowds to the shore, at the distance of three or four miles, to pick up the scanty provision which the shell-fish afforded them. They were miserably ill-clothed, and the huts in which they lived were dirty and mean beyond description. How different from their present situation! They now enjoy the necessaries and many of the comforts of life in abundance; even those who are supported by the charity of the parish feel no real want."

The southern counties presented the same picture of sloth, poverty, and wretchedness. The late Rev. Mr. Smith, in his Agricultural Survey of Wigtown and Kirkcubright, published in 1810, gives, on authority of persons "now living," the following details with respect to the state of husbandry and the condition of the people towards the middle of last century:—

"Their houses were commonly wretched, dirty hovels, built with stones and mud, thatched with fern and turf; without chimneys, filled with smoke, black with soot, having low doors and small holes for windows, with wooden shutters, or, in place of these, often stopped with turf, straw, or fragments of old clothes.

"The principal object of tillage was to afford straw for the winter support of the few cattle which the pasture (if such it could be called) maintained in summer. As they always overstocked, this was a difficult task; and the poor starved animals, before the return of spring, were reduced to the greatest extremities. Through mere weakness, often they could not rise of themselves. It was a constant practice to gather together neighbours to lift the cows or horses, or to draw them out of the bogs and quagmires into which they were tempted by the first appearances of vegetation.

"Nothing but the frugal, penurious manner in which the peasantry then lived, could have enabled them to subsist and pay any rent whatever. Their clothing was of the coarsest materials; their furniture and gardening utensils were often made by themselves; their food, always the produce of their farms, was little expensive, consisting chiefly of oatmeal, vegetables, and the produce of the dairy; if a little animal food was occasionally added, it was generally the refuse of the flock, unfit to be brought to market."

The situation even of the Lothians was but little better. So late as 1757, neither turnips, potatoes, clover, nor cultivated herbage of any sort had been introduced into that district. The condition of the occupiers and of the peasantry was also exceedingly depressed.

Such was the abject state of Scotland about the middle of last century! The existing Scotch farmers are distinguished by their superior intelligence and skill in agriculture, the excellence of their stock and implements, and their genteel, comfortable style of living. The labourers, too, are universally well fed and well clothed; their cottages are generally comfortable and well-furnished; and they are all in the enjoyment of luxuries that formerly were never tasted even by the most extensive proprietors.

The demand for butcher's meat in Scotland has increased in the most extraordinary manner. So late as 1763, the slaughter of bullocks for the supply of the public markets was a thing wholly unknown even in Glasgow, though the city had then a population of nearly 30,000! Previously to 1775, or perhaps later, it was customary in Edinburgh, Glasgow, and the principal Scotch towns, for families to purchase, in November, what would now be reckoned a small, miserable, half-fed cow or ox, the salted carcass of which was the only butcher's meat they tasted throughout the year. In the smaller towns and country districts this practice prevailed till the present century, but it is now almost everywhere abandoned. The consumption of butcher's meat in Glasgow, as compared with the population, does not at present differ materially from that of the metropolis.

In Ireland the proportion of the middle class has been considerably increased within the last half century; and it has had its full share of the improvements in which all classes of the people of England and Scotland have so liberally participated during that period.

Deducting 12,000,000*l.* for the value of seed, and the sums required to keep up the stock of horses, &c., we have the sum of 143,000,000*l.*, as representing the entire value of the various articles of agricultural produce annually consumed by man. At present (1836) the population of Great Britain may be taken at nearly 18,000,000, which consequently gives ($\frac{1}{18}$) 8*l.* very nearly, for the average annual consumption of each individual.

The annual value of the agricultural produce of Ireland may be estimated at 45,000,000*l.* Now if we deduct from this 6,000,000*l.* for the value of seed, and of the sums required to replace horses, &c., and 3,500,000*l.* for the values remitted in the shape of rent, &c., to absentee proprietors, we have 35,500,000*l.* to be dis-

tributed among the resident population; which, as the latter may be taken at about 8,500,000, gives nearly 4l. 3s. to each.

The improvements that have been made during the last half century in the clothing and lodging of the people of Great Britain, are even more remarkable than those that have been made in their food. The unparalleled abundance and cheapness of cotton goods, caused by the wonderful progress made in the cotton manufacture, have been, in this respect, of vast importance. "It is impossible," says Mr. Baines ('History of the Cotton Manufacture'), "to estimate the advantage, to the bulk of the people, from the wonderful cheapness of cotton goods. The wife of a labouring man may buy, at a retail shop, a neat and good print as low as 4d. per yard; so that, allowing seven yards for the dress, the whole material shall only cost 2s. 4d. Common plain calico may be bought for 2½d. per yard. Elegant cotton, prints for ladies' dresses, sell at from 10d. to 1s. 4d. per yard, and printed muslins at from 1s. to 4s., the higher-priced having beautiful patterns, in brilliant and permanent colours. Thus the humblest classes have now the means of as great neatness, and even gaiety, of dress as the middle and upper classes of the last age; and the peasant's cottage may at this day, with good management, have as handsome furniture for beds, windows, and tables, as the house of a substantial tradesman sixty years since." The price of most other articles of clothing has also been considerably reduced, at the same time that their fabric has been improved and beautified.

Since the middle of last century an extraordinary change for the better has taken place in the habitations of all classes. Any one must be struck with this who compares the houses in the old streets and lanes in any of our towns, with those built within the last fifty years. The latter are in all respects superior. They are constructed on a larger scale, the apartments are more spacious and lofty, they are better ventilated, and are supplied with water to an extent of which our ancestors had no idea. Hence the entire freedom of our great towns from epidemical diseases, and the astonishing improvement in the health of the inhabitants.

It may be truly affirmed that, with but few exceptions, all the farm-houses, offices, and cottages of Scotland have been rebuilt since 1780, and mostly, indeed, since 1800. From being the meanest and most wretched of their kind, they are now, speaking generally, well-contrived, substantial, and commodious. The progress of improvement has been such as to outstrip the anticipations even of the most sanguine, whether looking to the appearance of the country or to the condition of the people.

THE WASSAIL-BOWL.

THE custom of going about at the Christmas season with the wassail bowl has gradually declined, so much so indeed that probably many of our readers are unacquainted with its existence. In former times the wassailing party proceeded from door to door, singing certain verses, and bearing a wassail bowl, containing ale, nutmeg, sugar, toast, and roasted crabs or apples, which composition was sometimes called lamb's wool. The wassail bowl is alluded to by Shakspeare as the gossip's bowl in 'Midsummer Night's Dream,' (act 2, scene 1,) where Puck says—

"And sometimes lurk I in a gossip's bowl
In very likeness of a roasted crab."

The learned Selden, in his 'Table Talk,' compares the pope's sending relics as presents to princes to the wassailers of New-years' Eve, for he says, "they present you with a cup, and you must drink of a slabby stuff; but the meaning is, you must give them money ten

times more than it is worth." The wassail bowl is of great antiquity. Dr. Milner identifies it with the grace-cup of the Greeks and Romans, and Fosbrooke considers that as it is mentioned in Plautus, and was known in France, it could not have originated from the meeting of Vortigern and Rowena. To the Britons it was also known. According to Milner the introduction of Christianity by no means produced the destruction of the practice of wassailing, for it then began to assume a religious aspect, and the wassail bowl, which in great monasteries was placed on the abbot's table at the upper end of the Refectory, to be circulated and enjoyed by the community at his discretion, received the appellation of *Poculum Charitatis*. The ancient bowl was usually of silver oak or maple, with the inscription, Washiel, &c.; but in these days a more humble material is substituted. Brand derives Wassail from the Anglo-Saxon *Wær pæl*, be in health. Was-haile and Drinc-heil were ancient phrases among the English, and are considered to be synonymous with "Here's to you," and "I'll pledge you." In 1791 this custom appears to have been very much on the wane, for Macauley, in his 'History and Antiquities of Claybrook,' in Leicestershire, remarks that "John Payne and his wife, an aged couple, were well known from their having perambulated the hundred of Guthlaxton many years during the Christmas festivities, with a fine gewgaw, which they called a wassail, and which they exhibited with the accompaniment of a duet. He adds, "I apprehend the custom of wassailing will die with this aged pair; we are by no means so tenacious of old usages and diversions in this country as they are in many other parts of the world;" but his predictions are by no means verified, as the subsequent wassailers' song is sung in Gloucestershire, where the wassailers perambulate with an empty bowl, decorated with garlands and ribbons, to obtain certain small donations in return for the annual congratulation and song.

"Wassail! Wassail! all over the town,
Our toast it is white, our ale it is brown;
Our bowl it is made of a maplin tree,
We be good fellows all, I drink to thee.

Here's to Branch*, and to his right ear,
God send our maister a happy new year;
A happy new year as e'er he did see,
With my wassailing bowl I drink to thee.

Here's to Broad†, and to his right eye,
God send our mistress a good Christmas pye;
A good Christmas pye as e'er I did see,
With my wassailing bowl I drink to thee.

Here's to Filpail‡, and to her long tail,
God send our maister us never may fail,
Of a good cup of beer, I pray you draw near,
And then you shall hear our jolly wassail.

Be here any maids, I suppose here be some,
Sure they will not let young men stand on the cold stone,
Sing hey, O maids, come trole back the pin,
And the fairest maid in the house let us all in.

Come, butler, come bring us a bowl of the best,
I hope your soul in heaven will rest;
But if you do bring us a bowl of the small,
Then down fall butler, bowl and all."

State of Property in England and Wales.—Tenures.
—The tenures under which land is held in this country have grown out of the feudal system, and have differed materially at different periods of our history. At present landed property is of three sorts—freehold, copyhold, and leasehold. An estate belonging unconditionally to its owner, and held by him directly under the crown, or rather, under the law and constitution of the country, is said to be freehold. But freehold property may be liable to regular and fixed annual payments, provided it be not

* The name of a horse.

† Another horse.

‡ Name of a cow.

liable to fine, heriot, or forfeiture. Copyhold estates are held of a subject as part of a royalty, honour, or manor, and are liable to fines on account of deaths, transfers, and other such circumstances, according to the customs of the royalty, honour, or manor of which they form a part. Leasehold property is of various descriptions, such as long leasehold, as for 1000 years; life leasehold with a fine certain, or under certain limitations on renewal; life leasehold with an uncertain fine, payable to the proprietor or other superior; in this case, the latter reserves merely a conventional rent, the tenant having paid down a sum of money to obtain the lease and the right of alienation; this practice is common in the West of England. There is another kind of leasehold with an uncertain fine, payable to the proprietor, who receives the full rent of the land at the time of granting the lease, the lessor having a power of alienation; this is a common practice in Wales and some parts of England. The last species of leasehold property is, leasehold for an ordinary term, with the power of alienation. A lease without the power of alienation, or transfer, is not called a tenure. But though it merely gives a right of occupancy for some specified period, it is practically one of the most important tenures; much of the prosperity of every country, of which any considerable portion belongs to extensive proprietors, depending on the conditions in such leases.—*McCulloch's Statistical Account of the British Empire*, vol. i.

Magnitude of Estates.—Number of Proprietors, &c.—Estates vary exceedingly in most parts of England. The largest estate in the kingdom may be worth 100,000*l.* or upwards a-year; and there are estates of most inferior degrees of magnitude, down to the annual value of 40*s.*! In some counties property is more, and in others it is less, subdivided. In Cheshire, the East Riding of Yorkshire, and one or two other counties, there are comparatively few small proprietors; but the latter predominate in most parts of the West of England, in the North, and generally throughout the country. On the whole, we believe it may be safely affirmed, that by far the largest portion of the kingdom is parcelled into properties of less than 1000*l.* a-year. It is not difficult to account for the prevalent misconceptions on this point. Though few in number, the owners of large estates engross the attention of common observers, and hinder them from fixing their eye on the mass of obscure, petty landowners that constitute the great bulk of the class. Dr. Beeke, whose authority as to such matters is deservedly high, estimated the total number of proprietors in England and Wales at 200,000; and supposing the gross rental of the kingdom to be 30,000,000*l.* a-year, the average annual income of each, in his capacity of landlord, will be only 150*l.*! and seeing that a few have much more, it follows that many must have a good deal less. Hence it is, that few lead a more laborious life, or are more under the necessity of abstaining from luxurious indulgences, than the owners and occupiers of small landed properties. Nothing, in fact, can be a greater mistake than to suppose, as is generally done, that the landowners are an extremely opulent and an extremely indolent body. These may be the characteristics of a few individuals amongst them; but it would be quite as wide of the mark to affirm that they are generally applicable to the entire class, as that they are generally applicable to the classes of manufacturers and traders.—*Ibid.*

THE CHAJA, OR CRESTED SCREAMER.

ABOUNDING in feathered tribes remarkable for singularity of form, or brilliancy of plumage, South America presents us, among other interesting species, with two birds of considerable size, allied in many respects to the rails, gallinules, and other members of the family *Rallidæ*, yet distinguished by characters exclusively their own. The birds to which we allude have been termed "Screamers," from the loud and piercing cries which they utter, producing, when heard unexpectedly, a startling effect. These species constitute the genus *Palamedea*; and though one species has been long known to naturalists, having been described by Marcgrave, A.D. 1648, much is still to be learned respecting their habits and manners.

The first species to be noticed is the horned screamer (*Palamedea cornuta*) known in Guiana, by the name

of *Kamichi*, and in Brazil by that of *Anhima*. It is amidst the vast swamps and savannahs of Cayenne, Guiana, and Surinam, teeming with animated beings, that the horned screamer is to be found, and where its loud voice is to be heard at intervals above the incessant din of mingled cries, the croak of legions of frogs, and the hum of insect armies, which fill these districts with unceasing and discordant clamour. In size the horned screamer almost equals a turkey, and its voice is extraordinary and startling. According to Marcgrave it consists of the syllables *vyhou-vyhou* uttered loud, clear, and shrill. Nor is it only for its voice that the screamer is remarkable, but also for the weapons of offence and defence with which it is armed. On the shoulder (as it is termed) of each wing, are two large, sharp, and hard spurs, projecting directly forwards, and constituting formidable instruments. The presence of spurs on the wing occurs, however, in other birds, as well as in the screamer—we find them large and sharp in the jacanas and many species of plover, but in these cases the spur is single; in the screamer it is double on each wing;—and besides this there rises from the top of the head, in the present species, a slender-pointed horn, three or four inches in length, and gently curved forwards. The use of this appendage to the head is not clear, but there can be no possibility of mistaking the use of the shoulder-spurs. Snakes of various size, all rapacious and all to be dreaded, abound in the haunts frequented by the screamer, and these formidable weapons enable the bird to defend itself and its young against the attacks of such enemies. If not attacked, the screamer offers molestation neither to reptiles nor to birds; its habits are shy, its manners gentle, and it lives in pairs united for life. Pison and Marcgrave inform us, on the assertion of the natives, that when one dies, the survivor remains by the body uttering its cries, and thus often pines to death. This account must be taken with some allowance.

The head and beak, as well as the general contour of the body, remind us strongly of a gallinaceous bird—a turkey or fowl: its wings, however, are long and ample, its toes long and slender, its limbs elongated, scaly and naked above the joint. Like the heron and other grallatorial birds, it wades in the water, not however in pursuit of fishes and reptiles, as is the case with the beautiful but voracious bird we have named, but for the purpose of obtaining aquatic plants (and perhaps insects), on which it appears to feed exclusively,—its diet being in all probability similar to that of the gallinules, namely, grains and the leaves of marsh-growing vegetables. The beak of the screamer is in fact altogether unfitted for seizing fishes or reptiles; it is too short, too feeble, and moreover not shaped for such a purpose. Buffon, however, states, we suppose on the authority of Pison, that notwithstanding its beak is that of a granivorous bird, it lives on prey; and Dr. Latham states that reptiles constitute its food, though at the same time he quotes from good authority a case in which the stomach of one of these birds was opened after death, and nothing but vegetable matters found in it. The flight of the horned screamer, as might be expected from the length and expanse of its wings, is strong and sweeping; on the ground it walks with its head elevated, and with an air of pride, insomuch that many of the older writers regarded it as an aquatic kind of eagle. It is said to build its nest on the ground at the foot of a tree, and to lay two eggs, like those of a goose. The general colour of this species is glossy blackish brown, the under parts white. The head and upper part of the neck are covered with downy feathers, of a blackish colour interspersed with white.

The other species, which differs in some points from the horned screamer, is described by Azara under the name of Chaja, and is found in Paraguay. The chaja

or crested screamer, which is figured in the cut at the end of the present article, is destitute of the long slender horn on the head, but has the back of the head ornamented with narrow dishevelled feathers, two inches and a half in length; the beginning of this plume is between the eye and the beak; so that the crest encircles the head like a diadem, and hangs down behind. The general clothing of the head and neck consists of down, with the exception of a naked band towards the lower part of the latter;—this down is of a pale lead colour, the naked collar is flesh colour, and below it is a collar of black down; the general plumage is of a whitish grey; the wings and tail being blackish brown. Length of bird thirty-one inches.

The chaja lives singly or in pairs, but is sometimes seen in flocks; it frequents morasses, and the low marshy borders of rivers; it does not swim, but wades in quest of aquatic and other plants, on which alone it feeds. Azara observes that he has seen chajas brought up from the nest in various houses in the country, and that they were as domesticated as the poultry. The same writer also informs us that the chaja perches on the tops of the loftiest trees; on the ground it walks with the body horizontal, the head and neck raised vertically, the beak being kept rather down. Its cry is loud and shrill, and is uttered not only during the day, but the night also; that of the male is represented by the word *Chaja*, that of the female *Chajali*, and they respond to each other's call. The wings are armed with double spurs, which, with the diadem-like

crest, the size, the stately air and astounding cry of the bird, might lead to the idea of its being a bird of prey; whereas it is gentle and quiet. Its length of wing enables it to fly well, and it has an apparatus of extensive air cells between the skin and the muscles of the body, which are even continued down the legs to the toes. Like the vulture it wheels around in vast circles, and often rises till entirely out of sight.

August is the breeding season of this species; the female lays two eggs, and the young, while yet covered with down, follow their parents in the same manner as do the young of the plover and lapwing. The nest is spacious, and is constructed of twigs and sticks, and placed, according to some, on bushes and low trees surrounded by water; or, according to others, among the reeds and tall herbage which grow in the midst of the morass.

As in the former species, the limbs are naked above the joint, and are covered with hexagonal scales; the middle toe is united to the outermost by a web extending as far as the first joint; the claws are long, sharp, and scooped out beneath. The head is small; the eyes encircled by a naked skin, of a blood-red colour. The legs and toes are rose-pink, the claws black. We are not aware that living specimens of either species have been ever brought to our island, but we do not apprehend that there would be much difficulty in the accomplishment of their safe transportation.

The engraving represents an adult chaja, accompanied by its young, just hatched, and still clad in down.



[The Chaja and its Young.]

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ADDRESS TO THE READERS OF THE 'PENNY MAGAZINE' ON
THE COMPLETION OF ITS FIFTH VOLUME.



[The Arts offering their Tributes to Education. From a Design by Moreau in the Musée Français.]

THERE are periods in the existence of a periodical work, as there are in the lives of individuals, at which it is salutary to look back upon the past, and endeavour to lay down some general principles of conduct for the future. In the case of the 'Penny Magazine,' the continuous publication for five years has accumulated a great mass of materials which it may be desirable to analyze and point attention to, not only with the view of showing what objects have been accomplished, but of considering what new fields of observation and inquiry are presented to us.

In the first number of the 'Penny Magazine' the aim of the publication was thus stated: "We shall endeavour to prepare a useful and entertaining Weekly Magazine, that may be taken up and laid down without requiring any considerable effort. * * * * Whatever tends to enlarge the range of observation, to add to the store of facts, to awaken the reason, and to lead

the imagination into agreeable and innocent trains of thought, may assist in the establishment of a sincere and ardent desire for information; and in this point of view our little Miscellany may prepare the way for the reception of more elaborate and precise knowledge, and be as the small optic-glass called 'the finder,' which is placed by the side of a large telescope to enable the observer to discover the star which is afterwards to be carefully examined by the more perfect instrument." The object, which we have steadily kept in view for five years, was thus pretty accurately defined at the commencement of our undertaking. We did not profess to systematize any of the great branches of knowledge;—but by giving all the knowledge that came within our range an attractive form, to induce a desire for knowledge generally—and, by a constant reference to the best sources of information, to secure accuracy if we could not pretend to completeness. It has been often objected

to the 'Penny Magazine' that the desultory habit of reading which it induced was unfavourable to the cultivation of the popular mind, and that no real or abiding knowledge was the result of this miscellaneous information. It appears to us that this objection is founded upon a misconception, both as to the elements of which the popular mind is composed, and as to the channels in which the masses of the people who have little leisure must necessarily seek for instruction. The popular mind is not made up (as those reasoners assume who demand that books for the people should contain only the most condensed and exact enunciations of the elementary truths of morals and science) of energetic and hard-working persons—hard-working even in their leisure—who have no taste for the agreeable in connexion with the useful, and who require only solid intellectual food for their vigorous digestion. The popular mind is composed, in a much larger proportion than is thus assumed,—of the young of both sexes,—of those who having earned their daily bread look to reading as a relaxation,—of the busy and even of the idle, who are anxious to store their minds with facts, but at the least expense of study and research. Now we have no hesitation in expressing our opinion that, for the great body of the working people of this country, the Newspaper was the only accessible channel of general reading until the publication of the 'Penny Magazine.' The books within their reach were not only few, but they were exceedingly limited in their range. In No. 205 of the 'Penny Magazine' (June 13, 1835) will be found a very interesting paper, entitled, 'A Poor Student's Literary Expenditure.' A passage or two extracted or abridged from this paper will illustrate our meaning. The writer, after describing his anxious struggles as a poor boy to obtain money to purchase books, points out that when, in the year 1816, he was enabled to devote three-pence to such a purchase, the only works beyond nursery tales which he could procure were certain abstracts or reprints of popular fictions;—that when his mind outgrew the nutriment of these three-penny books, and he aspired to lay out a shilling in literature, the only purchases he could make were some of the very dear *number-books*, which were carried from house to house. He says, "I wish it to be borne in mind that, at the time to which this statement refers, books thus published in numbers formed the only works which can be deemed to have been accessible to the humbler classes of the community." With a few exceptions, such as 'Robinson Crusoe' and the 'Pilgrim's Progress,' the quality of these works every one knows to have been execrable; they were half a century behind the knowledge of their day; and they contained so few subjects of general literature or science that as storehouses of facts of any kind they were most insufficient. The paper on the 'Poor Student's Literary Expenditure' concludes as follows: "Great as my own difficulties were in winning an honest penny, I found it far more difficult to obtain an opportunity of expending that penny in a satisfactory manner. I exult beyond measure in the change which has taken place for the better within my own time, and

in the other and greater changes which I see before me. None but those who have known something of such struggles and difficulties as I have described, can well imagine the strong emotion which I sometimes experience as I view the windows of the numerous shops which, in the various cheap publications of the present day, do now, and ever must henceforth, offer advantages the want of which formed so serious an obstacle to my own progress in the early part of my career." Without assuming any merit that does not belong to us, we may venture to say that a considerable portion of this great change is to be ascribed, directly and indirectly, to the 'Penny Magazine.'

If we had succeeded only in giving the people a cheaper Miscellany than they ever before possessed, we should have accomplished only half our object. The Five Volumes of the 'Penny Magazine'—which may be purchased, bound, for Thirty-six Shillings, and which contain nearly 2500 Pages of Letterpress and above 1100 Engravings,—do not rest their claim to a permanent popularity upon the fact that they are five times as cheap as the old *number-books*, looking to quantity alone,—but that they contain a fund of instruction which was never before opened to the great body of the people. Let us endeavour to analyze this mass of information;—and we may perhaps be able to show that it has not been gathered together entirely without a system.

The Analytical Index which we have prepared to the Five Volumes now completed, is divided into seventeen heads. The first is that of *British Topography and Antiquities*. We have endeavoured to make the most remarkable Monuments of our Architecture, and the most interesting remains of past ages, as well as the present aspect of our great Towns and Cities, familiar to all. In this department alone we have given 270 engravings; which, added to upwards of 30 in the second class of *Bridges, Railroads*, and other public improvements (mostly British), present a total of at least 300 engravings connected with the Topography of the United Kingdom. A large proportion of these engravings are from original sketches. The information here collected would have to be sought in very many expensive volumes, which may in general be said to be quite inaccessible to the great body of readers. The *Trades and Manufactures* of our own and other countries, though not forming a very prominent feature, have been incidentally noticed,—and these subjects occupy 37 engravings, not reckoning the series of *English Coins* which has appeared in Volume V. The division of *Foreign Topography and Antiquities* embraces 148 engravings; and the Illustrations of the *Condition, Occupations, Amusements*, and other *Characteristics* of the People of different Periods and Countries, comprise 56 engravings;—making a total of 204 pictorial representations, many of which, as well as the descriptions, have been contributed by travellers who have themselves seen the places and persons described, and which could only otherwise be found in the manifold books of voyages and travels, which of themselves form a large library. *History and Biography*, especially the lives of great

benefactors of mankind, and of men remarkable for their devotion to knowledge, have occupied much of our work;—the engravings in these departments are 52. *Education*, and subjects connected with the advancement of popular instruction, form a class in our Index. To *Natural History*—especially to *Zoology*—we have devoted a large space throughout these volumes. The engravings of animals, and of vegetable and mineral productions, are 242 in number. It will of course be observed that those subjects of which very important particulars can be presented to the eye by pictures, have necessarily received a larger portion of our attention than other facts which depend wholly upon verbal description. It has been considered by us of the utmost importance to aim at the strictest accuracy in such representations; and thus the subjects of *Natural History* represented in our wood-cuts are as perfect in respect to form as can be attained by the most careful examination of living specimens, of stuffed figures, and of engravings where neither a living specimen nor a stuffed figure could be procured. The more popular departments of *Science*, such as *Geology*, *Astronomy*, *Meteorology*, *Mechanics*, &c., have not been neglected. In the department of the *Fine Arts* we have felt the great importance of familiarizing the people with the highest models of excellence. We have given upwards of 100 engravings, including some of the finest specimens of *Sculpture* and *Painting* which exist; and that we have been to a certain extent successful, we think the following evidence of a man of science, recently given before a Committee of the House of Commons, affords some proof:—

“The ease with which the principles and illustrations of art might be diffused I think is so obvious that it is hardly necessary to say a word about it. Here you may see it exemplified in the ‘*Penny Magazine*,’ and here are 150 cuts taken from the ‘*Penny Magazine*,’ many taken from the old masters, of painting and sculpture, and many of them very well done; and these 150 cuts, printed on drawing paper, and well bound, may be had for 14s. Such works as this, and the ‘*Saturday Magazine*,’ ‘*Chambers’ Journal*,’ and the ‘*Magasin Pittoresque*’ and the ‘*Magasin Universel*’ of Paris, could not have existed without the printing-machine; and every Saturday I have the satisfaction of reflecting that 360,000 copies of these useful publications are issued to the public, diffusing science and taste and good feeling, without one sentence of an immoral tendency in the whole.

“Is it not probable that the great extension given to these specimens of art, by the improvement in printing, is a new means of extending a knowledge of the arts?—Yes.

“And to an extent that could not exist without the printing-machine?—Certainly not.

“In fact, may not this diffusion of taste through the press be called the paper currency of art?—Yes, it is indeed the paper currency of art, and always represents sterling value. I should say, whatever means may be devised, either by public lectures, museums, &c., for the circulation of art, that those means may be rendered effective by means of the printing-machine.

“Is it not important, that as the printing-machine gives us such amazing facilities for circulating among the people a knowledge of art, that the works which it copies should, as far as it can accomplish them, be of the highest excellence?—It is.

“May not a tolerably correct outline of the works of great masters—Raphael, Michael Angelo, and others,—by that mode, find its way into the minds of the population in general?—Yes; in this very collection from the ‘*Penny Magazine*,’ are cuts from the pictures of Raphael, Rubens, Spagnoletto, Guido, Teniers, Ostade, Murillo, Quintin Matsys; and in sculpture, the Apollo, Niobe, Laocoon, &c.

“And is not this means of diffusing a knowledge of the arts (not by bringing people to places of instruction in art, but by conveying instruction to the doors of the people) a new era in instruction in design?—Decidedly; because, take the Cartoons of Raphael, it is quite clear that there are hundreds of thousands of persons who are now acquainted with what are the forms and figures and groupings in these cartoons, that never would have known them by any lecture or description whatever, and who would never have an opportunity of seeing the originals.

“In fact, the mechanic and the peasant, in the most remote districts of the country, have now an opportunity of seeing tolerably correct outlines of form which they never could behold before?—Exactly, and literally at the price they used to give for a song.

“And there is, therefore, a greater chance of calling genius into activity?—Yes; not merely by these books creating an artist here and there, but by the general elevation of the taste of the public. The art of wood-engraving itself has received an astonishing impetus from these publications.”

We might have thought that the attempts, thus described by Mr. Cowper, to convey some notion of the great works of Art to those who cannot have access to collections of pictures, and are unable to purchase elaborate and expensive engravings, might have done something to spread a knowledge, at least, of beauty of form and composition. A writer in a widely-circulated newspaper thinks otherwise. He is indignant at “a notion which is beginning to come into vogue, of the feasibility of diffusing a taste for the fine arts by means of cheap publications. The attempt,” he says, “originates in a creditable intention, but in a mistaken view of the case.” This writer then pronounces an opinion, from whose oracular solemnity we presume there is no appeal:—“As there is no royal road to mathematics, so we say, ONCE FOR ALL, there is no *Penny Magazine* road to the Fine Arts. Every ingredient in the cultivation of the arts, and in their practice, is expensive in the highest degree—great length of time, which all political economists know to be the dearest ingredient in production;—implements of the most expensive kind, and models most difficult to procure; and lastly, genius and invention, which are not to be purchased. These are points in the case which we do not think can ever alter; and until they do, the cultivation of the fine arts must be carried on by a comparatively small and gifted few, under the patronage of men of wealth and leisure*.” We do not quite understand all this, but we suppose it means, that the production of a picture or a statue for the exclusive gratification “of men of wealth and leisure,” is the sole end and object of the “cultivation of the Fine Arts;” that it is a matter of the most absolute indifference whether the bulk of the people have any perception of the beauty of Art, or any knowledge of its principles; that every attempt to diffuse Art by en-

* ‘*Morning Chronicle*,’ October 19, 1836.

gravings of pictures, or casts of sculpture, are hindrances to art, because the engraving or the model has not *every* excellence of the painting or the statue; that such men as Josiah Wedgwood, who introduced the forms of classic antiquity into our potteries, have adopted a most "mistaken view of the case;" that the French government, who have Schools of Design for manufacturers, with a view to maintain the superiority in pattern of their silks, have adopted a most "mistaken view of the case;" that our government, which has just established a School of Design for similar objects, is labouring under the same delusion; and that, once for all, as there is "no Penny Magazine road to the Fine Arts," the expenditure of Twelve Thousand Pounds upon the engravings of the 'Penny Magazine' has been an utter waste of capital with reference to the cultivation of Art, and the popular taste would have been as much advanced by the encouragement of the old manufacture of the red and blue prints which are still scattered by travelling Jews amongst the cottages of the agricultural population, and of the green and yellow parrots which are still sometimes seen upon the Italian boy's head, in ill-assorted company with Canova's Graces.

The wood-engravings of the 'Penny Magazine' have formed so characteristic a feature of the work, that it may be safely assumed that much of its unexampled success has depended upon their spirit and fidelity. From the commencement of the publication to the present time, no expense or labour has been spared to attain every improvement of which the art of wood-engraving is susceptible. A great many difficulties have been overcome in adapting the character of the engraving to the rapid movements of the printing-machine;—and sometimes the finest and most expensive execution of the wood-cut has failed to produce the effect desired. The art, however, in connexion with the cheapest form of printing, has been carried farther than was at one time thought to be possible; and it has realized in this way much of the excellence that was formerly only to be attained by the most slow and careful process of "working-off" the impressions. That the wood-cuts of the 'Penny Magazine' are considered to have attained as much excellence as can be reached in this department of art, may be shown by this fact;—stereotype-casts from many of these cuts are supplied for the illustration of similar foreign publications, which

appear in eleven different languages and countries. The list is as follows, and many interesting considerations are involved in the mere recital: Germany,—France,—Holland,—Livonia (in Russian and German),—Bohemia (Sclavonic),—Italy,—Ionian Islands (modern Greek),—Sweden,—Norway,—Spanish America,—the Brazils. In addition, the entire work is reprinted in the United States from plates sent from this country.

The Index to the five volumes of the 'Penny Magazine' which we have prepared for those who desire to purchase it separately, will show, much more completely than we have here attempted, the great divisions of the subjects to which its pages have been dedicated. We consider the close of the present Volume as a resting-place in the publication of our work, which has thus obtained a certain completeness, and has realized many of the objects which were contemplated at its commencement. For the future, without any material change in its plan, and without any alteration in its management, some new features will be introduced, which it is believed will increase its usefulness and its attractions. During the next year, 1837, certain articles will be published, which will have a connected value, and will, in all probability, be completed in the Volume. Amongst these will be a series of papers on the most important social characteristics of LONDON, which will be illustrated by about fifty engravings from original sketches. We shall also give a series of papers on the BRITISH FISHERIES, a subject highly interesting as a portion of Natural History, and as an important branch of National Industry. The author of the 'PURSUIT OF KNOWLEDGE UNDER DIFFICULTIES' will furnish some papers in continuation of his Volumes in the 'Library of Entertaining Knowledge.' Some of the Supplements will be devoted to notices of the great HISTORICAL ÆRAS OF MODERN TIMES,—such as the dominion of the Moors in Spain,—the establishment of the Turks in Europe,—the English wars in France,—the conquest of America, &c. It is unnecessary more minutely to specify the objects which we hope to accomplish. They will be undertaken with a view to carry forward our readers in the same road that we have so long travelled together,—but with some variety, which may be sought in a wider range of prospect over the great domain of Knowledge.

END OF VOLUME THE FIFTH.

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