

- i. 100 ; modern changes in conception of, 221 ; impetus to study of, given by French Revolution, 237 ; prejudices against, ii. 628 ; Sylvester on, 629, 631 ; use of, 630 ; Huxley on, *ib.* ; Lord Kelvin on, *ib.* ; Gauss on, 631 ; Cayley on, *ib.* ; twofold interest in, 632 ; origin of, 634 ; Euler on, 657 ; Abel and Jacobi's school of, *ib.*
- Mathurin, geometrical work of, i. 114.
- Matter and force mathematically defined, i. 334.
- Matter, circulation of, ii. 420 ; living, mobility of, 438.
- Matteucci, animal magnetism, ii. 475.
- Matthew, Patrick, 'Naval Timber and Arboriculture,' ii. 334 ; 347.
- Maudsley, Dr H., 'Physiology and Pathology of Mind,' ii. 512.
- Maupertuis followed Newton, i. 96 ; referred to by Voltaire, 105 ; Principle of least (or stationary) action, 231 ; astronomical constants, 322.
- Maury, Alfred, 'Les Académies d'autrefois,' i. 90, 99, 105 ; quoted on Voltaire and scientific progress, 106 ; quoted, 127, 135, 147, 148 ; 143 ; 226.
- Mauvein, i. 92.
- Maxwell, Transactions of Society of Agriculture, i. 284.
- Maxwell, James Clerk-, on probabilities, i. 120 ; 'Science and Freewill,' 124 ; his theories followed up in Germany and France, 251 ; and Faraday's "lines of force," 266 ; contributions to study of natural philosophy, 274 ; 'Heat,' 315, ii. 173 ; 'Electricity and Magnetism,' i. 323 ; electric theory, 344 ; "the astronomical method," 347 ; 'Action at a Distance,' 348 ; 'Electrical Researches of Cavendish,' 363 ; 'Physical Lines of Force,' 372 ; 'Equilibrium of Elastic Solids,' 379 ; Weber's theory, 380 ; "energy" a substance, 388 ; 'Dynamical Evidence of the Molecular Constitution of Bodies' quoted, 424 ; kinetic theory of gases, 433, ii. 34 ; the statistical view of nature, i. 438 ; 'Kinetics,' ii. 5 ; 'Scientific Papers' quoted, 33, 175 ; treatise on electricity and magnetism, 35 ; followed on the lines of Stokes, 55 ; quoted on Rankine's theory of molecular vortices, 62 ; "Atom," 'Encyclopædia Britannica,' 66 ; electro-magnetic theory, 73, 153 ; labours of, 76 ; theory of electricity, 78 ; "tubes of force," 80 ; electrotonic state of matter, 81 ; "On Physical Lines of Force," 82, 83 ; "elastic medium" in space, 84 ; "elastic disturbances" of that medium, 85, 86 ; theory of energy, 87, 88, 89 ; indefiniteness of electromagnetic theory, 93 ; physical view of nature, 141, 144 ; and Faraday's views, 145 ; electro-magnetic field, 147 ; 148 ; theory of electro-dynamical phenomena, 151 ; 'Theory of Heat,' 167 ; Willard Gibbs, 173 ; "available energy," 174 ; 179, 182 ; triumphs of atomic view, 188 ; 191, 193 ; difficulties of his theories, 194 ; Ampère, 341 ; statistical view, 574, 603 ; theory of probabilities, 590 ; statistical methods, 592, 593 ; "Sorting Demon," 594 ; quoted, 605, 606 ; on historical and statistical methods, 613 ; 624 *et seq.*, 630 ; on vector analysis, 655.
- Mayer, A. M., Young's colour theory, ii. 430.
- Mayer, Julius Robert. i. 218, 265, 309 ; theory of energy, ii. 97 ; his work theoretical, 99 ; scientific services of, 106 ; memoirs refused by Poggendorf, 107 ; measurement of "energy," 108 ; indestructibility of force, 111 ; neglect of earlier writings of, 113, 114 ; his views extended and elaborated by Thomson and Clausius, 116 ; 117 ; correlation and interchangeability of natural force, 119 ; perpetual motion, 124 ; the dynamical theory of heat, 128, 130 ; first philosophical generalisations on power and work, 137 ; "Kraft," 169 ; 207 ; "energy," 355 ; meteoric theory of the sun's heat, 357, 358 ; conservation of energy, 397 ; 398.
- Mayer, Tobias, Professor of Mathematics and Economics at Göttingen, i. 158 ; connection of, with modern science, 175 ; 176 ; method of least squares, 183 ; astronomical calculations of, 324 ; lunar theory, 329 ; 368.
- Measurements, Weber's fundamental, i. 368.
- Méchain, i. 113.
- Mechanical view of nature, ii. 183.
- Mechanism, ii. 399.
- Meckel, anatomist, ii. 248 ; morphological analogies, 251 ; 308 ; quoted by Huxley, 348 ; law of "biogenesis," 349.