electric currents and magnets, the phenomena of diamagnetism, Ampère's theory and Weber's basis of electric measurement, Seebeck's production of electric currents by heating in a non-homogeneous conductor, the remarkable phenomena known by the name of Peltier, the electro-dynamic properties of metals, the thermo-elastic properties of matter, were all studied in the light of the new principle, the conservation and transformation of energy. Another very important problem presented itself, viz., the introduction of the new ideas into the higher educational literature, the re-writing of the text-books of science on the basis of the principle of energy, and especially the development of the fundamental notions in mechanics in conformity with the more modern views. Here, then, it became evident that the physical view of natural phenomena, according to which they are all instances of the transformation of energy, could be considered and expounded as a further development of the laws of motion as laid down in Newton's 'Principia.' It was especially the third law of motion, in which Newton stated the equality of action and reaction, that lent itself to such an interpretation as would at once lead to the wider grasp and deeper insight into natural processes which the principle of energy afforded. Accordingly about the year 1860, when the new ideas on energy had, in the minds of the great pioneers, acquired that importance which has enabled them to become the basis of a more and more comprehensive view—the physical view—of natural phenomena, the necessity was experienced of