

*Joule's Electrical Generator and
Its Special Educational Interest*

GIORGIO DRAGONI, and LUISA FIANDRI

Bologna University

L. DE PASQUALE

Teacher of Physics, Bologna, Italy

ABSTRACT. According to the original James Prescott Joule (1818–1889) papers, it was possible to reproduce two replicas of his famous apparatus on the existence of an equivalent relation between heat and the ordinary forms of mechanical power: The Paddle wheel driven by falling weights and The Generator: rotating coil surrounded by water. The latter will be illustrated in detail according to its special educational interest. In fact, the Generator (or Rotor) can be used for the illustration of the following physical concepts: electromagnetic induction, Joule's law of electrical heating, conservation principle, etc.