other forces of nature into his consideration, showing, in the case of the phenomena of heat, electricity, galvanism, and magnetic induction, how the different agencies can be brought into comparison with mechanical ones by measuring the work they perform; refers to the attempts to fix the mechanical value of heat; concludes in each case that no observed phenomena—not even the processes in living organisms—stand in contradiction with the principle announced, and ends with the words: "I think in the foregoing I have proved that the above-mentioned law does not go against any hitherto known facts of natural science, but is supported by a large number of them in a striking manner. I have tried to enumerate as completely as possible what consequences result from the combination of other known laws of nature, and how they require to be confirmed by further experiments. The aim of this investigation, and what must excuse me likewise for its hypothetical sections, was to explain to natural philosophers the theoretical, practical, and heuristic importance of the law, the complete verification of which may well be looked upon as one of the main problems of physical science in the near future." [1] The reasons why this valuable document attracted little attention at the time and was set aside, as were the earlier contributions of Mohr and Mayer, by the central organ of experimental physics abroad, are interesting from a historical point of view. The first and main reason seems to have been that none of the three original and independent expressions contained any new experimental

[1] 'Gesammelte Abhandlungen,' vol. i. p. 67.