force, and, on the 10th of December,[4] announced to the Royal Society that he had seen Mr. Newton's book, *De Motu Corporum*. The feeling that mathematicians were on the brink of discoveries such as are contained in this work was so strong, that Dr. Halley was requested to remind Mr. Newton of his promise of entering them in the Register of the Society, "for securing the invention to himself till such time as he can be at leisure to publish it." The manuscript, with the title *Philosophiæ Naturalis Principia Mathematica*, was presented to the society (to which it was dedicated) on the 28th of April, 1686. Dr. Vincent, who presented it, spoke of the novelty and dignity of the subject; and the president (Sir J. Hoskins) added, with great truth, "that the method was so much the more to be prized as it was both invented and perfected at the same time."

The reader will recollect that we are here speaking of the *Principia* as a Mechanical Treatise only; we shall afterwards have to consider it as containing the greatest discoveries of Physical Astronomy. As a work on Dynamics, its merit is, that it exhibits a wonderful store of refined and beautiful mathematical artifices, applied to solve all the most general problems which the subject offered. The *Principia* can hardly be said to contain any new inductive discovery respecting the principles of mechanics; for though Newton's *Axioms or Laws of Motion*, which stand at the beginning of the book, are a much clearer and more general statement of the grounds of Mechanics than had yet appeared, they do not involve any doctrines which had not been previously stated or taken for granted by other mathematicians.

The work, however, besides its unrivalled mathematical skill, employed in tracing out, deductively, the consequences of the laws of motion, and its great cosmical discoveries, which we shall hereafter treat of, had great philosophical value in the history of Dynamics, as exhibiting a clear conception of the new character and functions of that science. In his Preface, Newton says, "Rational Mechanics must be the science of the Motions which result from any Forces, and of the Forces which are required for any Motions, accurately propounded and demonstrated. For many things induce me to suspect, that all natural phenomena may depend upon some Forces by which the particles of bodies are either drawn towards each other, and cohere, or repel and recede from each other: and these Forces being hitherto unknown, philosophers have pursued their researches in vain. And I hope

[4] Id. p. 184.