

real or imagined blemishes in the work. Against the validity of Newton's determination of the path described by a body projected in any part of the solar system, Bernoulli urges a cavil which it is difficult to conceive that a mathematician, such as he was, could seriously believe to be well founded. On Newton's determination of the path of a body in a resisting medium, his criticism is more just. He pointed out a material error in this solution: this correction came to Newton's knowledge in London, in October, 1712, when the impression of the second edition of the *Principia* was just drawing to a close, under the care of Cotes at Cambridge; and Newton immediately cancelled the leaf and corrected the error.<sup>1</sup>

This problem of the motion of a body in a resisting medium, led to another collision between the English and the German mathematicians. The proposition to which we have referred, gave only an indirect view of the nature of the curve described by a projectile in the air; and it is probable that Newton, when he wrote the *Principia*, did not see his way to any direct and complete solution of this problem. At a later period, in 1718, when the quarrel had waxed hot between the admirers of Newton and Leibnitz, Keill, who had come forward as a champion on the English side, proposed this problem to the foreigners as a challenge. Keill probably imagined that what Newton had not discovered, no one of his time would be able to discover. But the sedulous cultivation of analysis by the Germans had given them mathematical powers beyond the expectations of the English; who, whatever might be their talents, had made little advance in the effective use of general methods; and for a long period seemed to be fascinated to the spot, in their admiration of Newton's excellence. Bernoulli speedily solved the problem; and reasonably enough, according to the law of honor of such challenges, called upon the challenger to produce his solution. Keill was unable to do this; and after some attempts at procrastination, was driven to very paltry evasions. Bernoulli then published his solution, with very just expressions of scorn towards his antagonist. And this may, perhaps, be considered as the first material addition which was made to the *Principia* by subsequent writers.

6. *Constellation of Mathematicians.*— We pass with admiration along the great series of mathematicians, by whom the science of theoretical mechanics has been cultivated, from the time of Newton to our own. There is no group of men of science whose fame is

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<sup>1</sup> MS. Correspondence in Trin. Coll. Library.