

CHAPTER III.

SEQUEL TO THE EPOCH OF GALILEO.—PERIOD OF VERIFICATION AND DEDUCTION.

THE evidence on which Galileo rested the truth of the Laws of Motion which he asserted, was, as we have seen, the simplicity of the laws themselves, and the agreement of their consequences with facts; proper allowances being made for disturbing causes. His successors took up and continued the task of making repeated comparisons of the theory with practice, till no doubt remained of the exactness of the fundamental doctrines: they also employed themselves in simplifying, as much as possible, the mode of stating these doctrines, and in tracing their consequences in various problems by the aid of mathematical reasoning. These employments led to the publication of various Treatises on Falling Bodies, Inclined Planes, Pendulums, Projectiles, Spouting Fluids, which occupied a great part of the seventeenth century.

The authors of these treatises may be considered as the School of Galileo. Several of them were, indeed, his pupils or personal friends. Castelli was his disciple and astronomical assistant at Florence, and afterwards his correspondent. Torricelli was at first a pupil of Castelli, but became the inmate and amanuensis of Galileo in 1641, and succeeded him in his situation at the court of Florence on his death, which took place a few months afterwards. Viviani formed one of his family during the three last years of his life; and surviving him and his contemporaries (for Viviani lived even into the eighteenth century), has a manifest pleasure and pride in calling himself the last of the disciples of Galileo. Gassendi, an eminent French mathematician and professor, visited him in 1628; and it shows us the extent of his reputation when we find Milton referring thus to his travels in Italy:¹ "There it was that I found and visited the famous Galileo, grown old, a prisoner in the Inquisition, for thinking in astronomy otherwise than the Franciscan and Dominican licensers thought."

Besides the above writers, we may mention, as persons who pursued and illustrated Galileo's doctrines, Borelli, who was professor at Florence and Pisa; Mersenne, the correspondent of Descartes, who was

¹ *Speech for the Liberty of Unlicensed Printing.*