

Memorials of Galileo Galilei, 1564-1642 : Portraits and paintings, medals and medallions, busts and statues, monuments and mural inscriptions / by J.J. Fahie ; with 20 portraits and 42 other illustrations.

Contributors

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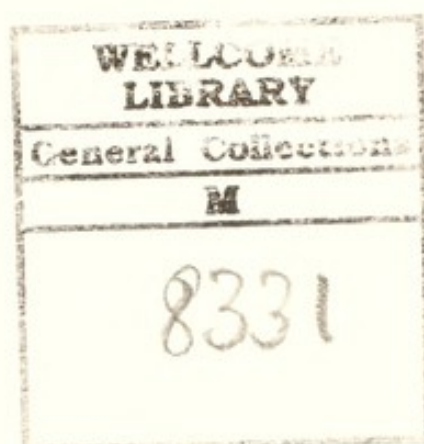
MEMORIALS
OF
GALILEO GALILEI
1564-1642

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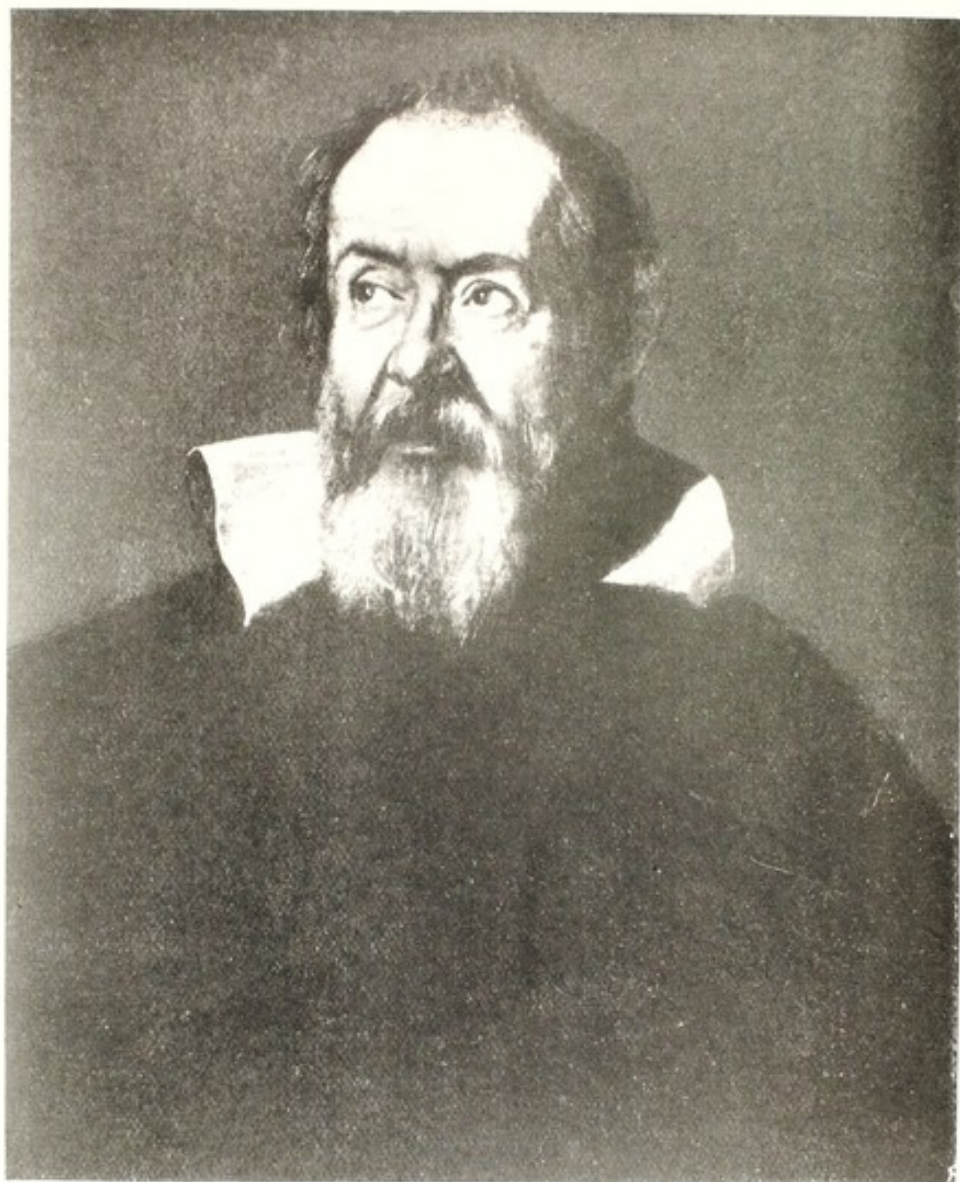
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MEMORIALS OF GALILEO GALILEI

MEMORIALS OF GALILEO GALILEI

FRONTISPIECE.



Deuot: et Oblig: ser.

Galileo Galilei

Portrait of Galileo by Sustermans, 1635, in Uffizi Gallery, Florence.
From a photograph by Alinari.

MEMORIALS
OF
GALILEO GALILEI, 1564-1642

PORTRAITS AND PAINTINGS
MEDALS AND MEDALLIONS
BUSTS AND STATUES
MONUMENTS AND MURAL INSCRIPTIONS

By

J. J. FAHIE

Author of: Galileo: His Life and Work, 1903
The Scientific Works of Galileo, 1921; etc.

With 20 Portraits and 42 other Illustrations

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"Were we to distinguish the ranks of men by their genius and capacity more than by their virtue and usefulness to the public, great philosophers would certainly challenge the first rank, and must be placed at the top of mankind. So rare is this character that, perhaps, there have not as yet been more than two in the world who can lay a just claim to it. At least, Galileo and Newton seem to me so far to excel all the rest that I cannot admit any other into the same class with them."

HUME'S ESSAYS: "ON THE MIDDLE STATION OF LIFE."

"E se noi fussimo ora in quella Repubblica Romana Antica, credo certo che gli sarebbe stata eretta una statua in Campidoglio per onorare l'eccellenza del suo valore."

CARDINAL DEL MONTE (ROME) TO COSIMO II (FLORENCE), 31 MAY, 1611.



DEDICATED

to the Memory of

ANTONIO FAVARO,

*late Professor in the Royal University of Padua,
Editor-in-Chief of the Edizione Nazionale
delle Opere di Galileo Galilei.*

*My Guide, Philosopher, and Friend
in Galileian Studies,*

by

One whom he called

"Il mio carissimo amico e principale collaboratore."

The Author.

PREFACE.

After the completion of the *Edizione Nazionale Delle Opere di Galileo* in 1910—the main work of his life—the late Professor Antonio Favaro of Padua University occupied himself in what I may call gleaning operations, which have yielded many a goodly sheaf. Ranging from 1878 to 1922, he has published, in all, nearly 500 separate studies (books and papers) on matters relating to the life, times, and activities of his great Master. The vastness of the labour involved in this kind of literary work can be appreciated by those only who have themselves engaged in historical researches.

In 1913, he began a series of papers, entitled “*Studi e Ricerche per una Iconografia Galileiana*,” in which I was able to render considerable assistance. Part IV, the last of the series, was printed early in 1916 (*Atti Del Reale Istituto Veneto di Scienze, Lettere, ed Arti*, 1915-16, Vol. 75); and it was his intention to rearrange these materials later on, and publish them in book form, with all the illustrations we were able to collect. Unfortunately, the strain of the Great War made this impossible, and the design was put aside for another day. But that day was not to be; the worries of the War, his growing disabilities owing to a fractured femur (1914), and, latterly, his more pressing duties as Editor-in-Chief of the *Edizione Nazionale Delle Opere Di Leonardo da Vinci*, left him little time for anything else. Writing from his villa at Fiesso d’Artico (Venezia), August 21st, 1918, he says pathetically:—“After my long exile in Rome I am here without knowing how long I can stay, on account of military occupations to which my

PREFACE

poor old home has been and will be subjected. . . While in Rome I had a new charge from the Government—that of the care of a National Edition of Leonardo's Works on the lines of my edition of Galileo. Unhappily, I am too old for carrying it to an end, but I hope to be able to set it well on foot."

Favaro gives us an account of the evolution of his *Iconografia Galileiana* which I condense:—"Vol. XX, the last of the National Edition of Galileo, contains, besides copious indexes, a number of biographical sketches of contemporaries and friends of Galileo. At first it was my intention to illustrate each biography with a portrait, or, at least, those of them for which I could find portraits. For this purpose I had collected some dozens when I realized that the design must be abandoned on account of the great expense of time and money. Even if I had persisted, it would be all the more necessary to prepare a life of Galileo himself, with reproductions of his best portraits (or, at least, those made from life). But while that idea also had to be relinquished for various reasons, I continued my researches, limiting myself, however, to Galileo, but enlarging the scope so as to include all forms—paintings, prints, busts, medals, statues, and monuments, which at various times were produced in commemoration of Il Sommo Filosofo.

"I make no pretence at exhausting the subject, for in this kind of research, as in that of bibliography, it is very difficult, not to say impossible, to make at one stroke a complete record. In such cases it is necessary to be courageous in producing samples, which, attracting the attention of those interested, will be nuclei around which other samples will group themselves, until something like completeness is attained" ("Atti Del Reale Istituto Veneto," 1912-13, Vol. 72).

Such was Favaro's design, but he died on September 30th, 1922, leaving the proposed work, not merely unfinished, but not

PREFACE

even begun. Knowing how near to his heart the subject lay, and considering my own collaboration in it, I deem it a sacred duty to carry out his design as well as I can; and this I proceed to do in the following pages. As showing my fitness for this task, I may be allowed to quote a few words of my valued friend:—
“Ma poichè i gravissimi avvenimenti che tengono sconvolto il mondo tutto intero hanno rimandato, e forse definitivamente, il disegno di una *Iconografia Galileiana Illustrata*, parmi opportuno di continuare a tener conto di alcuni altri risultati delle indagini che, dandomi novella prova della sua preziosa amicizia, ha raccolto in Inghilterra il signor J. J. Fahie, della cui cooperazione cortese e feconda ho avuto così ripetutamente a lodarmi nel corso di queste mie ricerche” (*Atti e Memorie, R. Accademia Di Padova*, 1918, Vol. 34, p. 20).

One word more: If I have succeeded in interesting my readers, I ask their assistance in return. There are many missing portraits in my story, and there must be other examples of reproductions in oils and in prints which have not come under our notice. Should, then, any reader be able to correct or amplify the text in the smallest particular, or, better still, be able to add new material, I will be more than recompensed.

CONTENTS

	PAGES
PREFACE	xi-xiii
INTRODUCTION, CHARACTER SKETCH	1-6
PART I. PORTRAITS FROM LIFE.	
Section I. Supposed portrait of Galileo, by himself	7-8
Section II. Portrait by Santi di Tito; Engraving by Joseph Calendi; Reproductions	9-10
Section III. Portrait by Dom. Tintoretto; Engraving by N. Schiavoni	10-12
Section IV. Portrait by Lodovico Cigoli	12-13
Section V. Portrait by Francesco Villamena; Engraving after him- self; Reproductions	13-16
Section VI. De l'Ecole de Cristofano dell' Altissimo; Engraving (woodcut); Pencil Drawing	16-18
Section VII. Portrait by Ottavio Leoni; Engraving after himself; Crayon Drawings; Reproductions	19-23
Section VIII. Portrait by Passignani; Engraving by Bettellini; Reproductions	24-29
Section IX. Replica of last by Passignani; Engravings (1) by Allegrini, (2) by Calendi; Reproductions	29-31
Section X. Portrait by Joachim von Sandrart; Engraving by B. Kilian	31-32
Section XI. Portrait by Giusto Sustermans (1635); Copies in oils (13) by various Artists; Reproductions in Prints and Books; Table of other Reproductions	32-41
Section XII. Portrait (<i>Bozza</i>) by Sustermans (1636); Reproduction .	42-43
Section XIII. Portrait by Sustermans (1640); 2 Replicas: (1) In the Pitti Gallery (2 copies in oil, (a) by Francesco Boschi, (b) by Allan-Ramsay, engravings by Luigi Calamatta and Robert Hart); Reproductions; (2) In the Bodleian Library, Oxford; (3) In pos- session of a lady in London	43-50

CONTENTS

	PAGES
Section XIV. Last Portraits (2) from Life: (1) by Claude Mellan; (2) by Niccolò della Fiora	50-51
Section XV. Doubtful Portraits (5) by Unknown Artists	51-52
Section XVI. Engraved Portraits in (1) The British Museum (Print Room); (2) "Collectanea Biographica" (in the Print Room)	53-54
Section XVII. Engraved Portraits in Département des Estampes de la Bibliothèque Nationale, Paris, 1899	54-56
Section XVIII. Prints in Books and Periodicals, compiled by the American Library Association	57-59

PART II. SUBJECT PICTURES.

Section I. Galileo and the Inquisition	60-65
Section II. Le Jugement de Galilée, by Henri de Triqueti	66
Section III. Condamnation de Galilée, artist unknown	66
Section IV. Galilée devant le Saint-Office; by J. N. Robert-Fleury; Reproductions	66-67
Section V. Rétraction de Galilée, by Cabasson; Engraving, Cabasson del. Lechard sculp.	68
Section VI. Galileo dinanzi l'Inquisizione, by Cristiano Banti; Engraving; Marrubini deseg. L. Paradisi inc.	68-69
Section VII. L'Abjura di Galileo, by Giovanni Squarcina	69-70
Section VIII. Galileo dinanzi l'Inquisizione, by Carlo Chelli; Engraving by Giovanni Boschi	70
Section IX. Galileo al Tribunale dell' Inquisizione, by Niccolò Barabino; Reproduction in <i>Tarsiatura</i> , by Vincenzio Garassino	71-72
Section X. Galilée en Prison, by ? B. E. Murillo	72-75
Section XI. Galilée en Prison, by J. A. Laurent; Engravings by Dien, Chollet, and Reveil	75-77
Section XII. Milton visiting Galileo in Prison, by S. A. Hart; Engraved by W. J. Linton	77-89
Section XIII. Captivité de Galilée, by Carlo Müller; Engraved by Rousseau; Lithographed by Righi e Betti	80
Section XIV. Galileo in Prison, by Carl von Piloty; Engraved by L. Meyer	81
Section XV. Galileo in the Uffizi Corridor; Engraving, Menabuoni diseg. Francesco Zucchi inc.	82

CONTENTS

	PAGES
Section XVI. First Exhibition of the Telescope, from an old Dutch Print; Table of Pictures, of which the telescope is the <i>motif</i>	82-86
Section XVII. Galileo in Elysium, by James Barry	87-88
Section XVIII. Galileo as Columbus, by Giovan. Bat. Cipriani; Engraving by J. Godby	89-90
Section XIX. Galilée étudiant le Mouvement de la Terre, by Paul Delaroche	91
Section XX. Galileo and the Leaning Tower, Pisa, by J. N. Robert-Fleury	92-93
Section XXI. Galileo in House Decoration, by Samoggia	93
Section XXII. Galileo and the States-General of Holland, by Demostene Macciò	93-95
Section XXIII. Galileo and a young Scholar; 2 Pictures: (1) by Cesare Cantagalli, (2) by Carlo Jozzi	95-96
Section XXIV. Galileo in the Astronomers' Paradise, by Andriolli; Engraving by A. Wolynski	96-97
Section XXV. Galileo e Milton in Torre del Gallo, by Annibale Gatti	97-99
Section XXVI. Galileo e i Suoi Scolari in Arcetri, by Niccolò Barabino; Fotocalcografia by Fuzetti	100-101
Section XXVII. Milton e Galileo in Arcetri, by Tito Lessi; Engraving by A. Mathey-Doret	101-102
Section XXVIII. Various paintings (5), of which particulars are required	103

PART III. MEDALS AND MEDALLIONS.

Section I. Medal in possession of Prof. Antonio Favaro	104
Section II. Medals (6), collected by Nelli and published in his "Vita * * * di Galileo," Losanna, 1793	104-106
Section III. Medals (5), collected by Prof. Antonio Favaro	106-108
Section IV. Medals (5), in British Museum	109
Section V. Medallion by Josiah Wedgwood, in the Museum, Liverpool	109-111
Section VI. Medallion, by James Tassie	112-113
Section VII. Medallion, by A. Guarducci, in Façade of Duomo, Florence	113-117

CONTENTS

	PAGES
Section VIII. Medallion, by Pietro Rossi	117-122
Section IX. Plaques (5), collected by Prof. Antonio Favaro	122

PART IV. BUSTS AND STATUES.

Section I. Busts (2), by Caccini and Mochi	123-125
Section II. Bust, by Pietro Tacca	125-126
Section III. Bust in Terracotta, Artist unknown	127
Section IV. Bust in Old Age, by Foggini	127
Section V. Bust by Luigi Ferrari	128
Section VI. Bust in Pincio Gardens, Rome; Sculptor unknown	129
Section VI _A . Busts, various, collected in Table	130
Section VII. Statue in Padua, by Danieletti	131
Section VIII. Statue in Pisa, by Emilio Demi	132
Section IX. Statues in Florence: (1) Uffizi Gallery, (2) Tribuna di Galileo	133
Section X. Statue in Oxford University Museum, by Alexander Munro; Model of same in Ashmolean Museum	133-134
Section XI. Statue in Science Museum, South Kensington, by Andrea Boni	134-135
Section XII. Statue in The Exchange, Liverpool, by W. F. Woodington	136
Section XIII. Statue on Burlington House, North Façade, by Wyon	137
Section XIV. Statue in Milan, by Pietro Magni	137-138
Section XV. Galileo and Milton, a group, in Rome, by Cesare Aureli	138-139
Section XVI. Statue in Belfast, by Pio Fedi	139-141
Section XVII. Plaster Group in Pisa, by Ezio Sighieri	141

PART V. MONUMENTS AND MURAL INSCRIPTIONS.

Section I. Tomb in Santa Croce, Florence, by Gio. Batista Foggini	142-144
Section II. Tribuna di Galileo, Florence, by G. Martelli	144-150
Section III. Galileo in House Decoration	151
Section IV. Cippo al Pincio, Rome	151-152

CONTENTS

	PAGES
Section V. Projected Memorials: (1) in Venice, by Pividor; (2) in Paris; (3) in Pisa	152-154
Section VI. Bust and Inscriptions on front of Viviani's House in Florence	154-156
Section VII. Bust and Inscription on front of Galileo's House in Bellosguardo	156-157
Section VIII. Bust and Inscription on outer wall of Il Gioiello, Arcetri	158-160
Section IX. Bust and Inscription on front of Galileo's Cottage in Florence	160
Section X. Bust and Inscription on wall of Doge's Palace, Venice .	161

APPENDIX. SPURIOUS GALILEOS.

Section I. Gerard Dou's Ein Gelehrter Jude, as a Galileo . . .	162-165
Section II. Wyatt's Astronomer, as a Galileo	165-166
Section III. Bassano's Effigies Incognita, as a Galileo	166-167
Section IV. Torriglia's Death of Charles V, as a Galileo . . .	167-168
Section V. Portrait of a Nun as Galileo's Daughter	169-170
Section VI. Ribera's Filosofo, as a Galileo	170-172

ILLUSTRATIONS

	PLATE
Portrait of Galileo by Sustermans, 1635, in Uffizi Gallery, Florence, from a photograph by Alinari	<i>Frontispiece</i>
Portrait by Santi di Tito, from an engraving by Joseph Calendi (<i>see page 9</i>)	I
Portrait by Domenico Tintoretto in possession of Mr. G. H. Gabb, London (<i>see page 10</i>)	II
Portrait by Francesco Villamena, from an old engraving (<i>see page 14</i>)	III
Portrait de l'Ecole de Cristofano dell' Altissimo, from an old woodcut (<i>see page 17</i>)	IV
Pencil Drawing of same (<i>see page 18</i>)	IV
Portrait by Ottavio Leoni, from his own engraving (<i>see page 20</i>) .	V
From Leoni's Crayon Drawing (<i>see page 21</i>)	VI
Portrait by Passignani, from an engraving by Pietro Bettellini (<i>see page 24</i>)	VII
From Passignani's Original in the Lansdowne Collection, London (<i>see page 26</i>)	VIII
Passignani's Replica, from the picture in the Museo Galileiano, Torre del Gallo, Florence (<i>see page 29</i>)	VIII
Dominican Convent, Santa Maria Sopra Minerva, Rome, from an old engraving, <i>tempo Galileo</i> (<i>see page 36</i>)	IX
Portrait by Sustermans, 1640, in the Pitti Gallery, Florence (<i>see page 43</i>)	IX
Sustermans' copy of same in the Bodleian Library, Oxford (<i>see page 46</i>)	X
Sustermans' Original of Plates IX and X in the possession of Miss V. F. Robinson, London (<i>see page 47</i>)	XI
Portrait by Claude Mellan in the Vatican Library (<i>see page 51</i>) .	XI

ILLUSTRATIONS

	PLATE
Portrait by unknown Artist in the Museo Galileiano, Torre del Gallo, Florence (<i>see page 52</i>)	XII
Portrait of Pope Paul V in the Uffizi Gallery, Florence (<i>see page 62</i>)	XIII
Portrait of Pope Urbano VIII in the Uffizi Gallery (<i>see page 62</i>) .	XIII
Inquisition Scene by Robert-Fleury, in the Louvre, Paris (<i>see page 66</i>)	XIV
Inquisition Scene by Cabasson, from an engraving (<i>see page 68</i>) .	XV
Inquisition Scene by Niccolò Barabino, Fresco in the Palazzo Celesia, Genoa; photograph by A. Fuzetti, Milan (<i>see page 71</i>)	XV
Copy of last in <i>Tarsiatura</i> (inlaid woodwork), by Vincenzo Garassino, Savona, Liguria (<i>see page 71</i>)	XVI
Prison Scene by Murillo in possession of Jules van Belle, Roulers, Belgium (<i>see page 74</i>)	XVI
Prison Scene, by J. A. Laurent, from an engraving by Reveil (<i>see page 77</i>)	XVII
Prison Scene, by S. A. Hart, from W. J. Linton's wood engraving in the British Museum (Print Room) (<i>see page 78</i>)	XVII
Prison Scene, by Carl von Piloty, from an engraving by F. L. Meyer (<i>see page 81</i>)	XVIII
Portrait of Galileo as Columbus, by G. B. Cipriani, from an engraving by J. Godby (<i>see page 89</i>)	XIX
Leaning Tower of Pisa, from a photograph by Alinari (<i>see page 92</i>)	XX
Milton visiting Galileo, by Annibale Gatti, from a photograph by Alinari (<i>see page 99</i>)	XXI
Galileo and his Scholars, by Niccolò Barabino, in the Palazzo Orsini, Genoa, from a photograph by A. Fuzetti (<i>see page 100</i>)	XXII
Milton and Galileo in Arcetri, by Tito Lessi, from an engraving by A. Mathey-Doret (<i>see page 102</i>)	XXIII
Medals (6), collected by Nelli, and engraved in his "Vita e Commercio Letterario di Galileo," 1793 (<i>see page 105</i>)	XXIV
Same as last, with slight differences (<i>see page 105</i>)	XXV
Medallion, by Josiah Wedgwood, in the Museum, Liverpool (<i>see page 110</i>)	XXVI
Medallion, by James Tassie, from one in the Author's possession (<i>see page 112</i>)	XXVI

ILLUSTRATIONS

PLATE

Medallion, by A. Guarducci, in Façade of the Duomo, Florence, from a photograph by Alinari (<i>see page 114</i>)	XXVII
Medallion, by Pietro Rossi, on occasion of Tercentenary of Galileo's Professorship in Padua (<i>see page 117</i>)	XXVIII
Bust in Plaster, by Caccini, in the Master's Lodge, Trinity College, Cambridge (<i>see page 124</i>)	XXIX
Bust in Bronze, by Pietro Tacca, in possession of Mr. Maurice Rosenheim (<i>see page 126</i>)	XXX
Bust in Plaster, Artist unknown, in Museo Galileiano, Torre del Gallo (<i>see page 127</i>)	XXXI
Bust in Marble, by Luigi Ferrari, in Aula Magna, Padua University (<i>see page 128</i>)	XXXII
Statue in Marble, by Pietro Danieletti, in Prato della Valle, Padua (<i>see page 131</i>)	XXXII
Prato della Valle, Padua, from a photograph by Alinari (<i>see page 131</i>)	XXXIII
Statue in Marble, by Emilio Demi, in Hall of the University, Pisa (<i>see page 132</i>)	XXXIV
Statue in Terracotta, by Andrea Boni, in the Science Museum, South Kensington (<i>see page 134</i>)	XXXIV
Design for Pendulum Clock, by Vincenzo Galilei, from his father's dictation (Galileian MSS., Florence) (<i>see page 135</i>)	XXXV
Statue in Marble, by Pio Fedi, in the Medical Institute, Belfast (<i>see page 140</i>)	XXXVI
Tomb in Santa Croce, Florence, by Gio. Bat. Foggini, from an old engraving (<i>see page 143</i>)	XXXVII
Tribuna di Galileo, Florence, from a photograph by Alinari (<i>see page 144</i>)	XXXVIII
The Rising, The Zenith, and The Setting of Galileo's Genius (Frescos in Tribuna di Galileo), from old engravings (<i>see page 147</i>)	XXXIX
Galileo's Telescopes, in the Tribuna di Galileo (<i>see page 148</i>)	XL
Galileo's Loadstone and Geometrical and Military Compass, In Tribuna di Galileo (<i>see page 148</i>)	XL
Inclined Plane Experiment, Fresco in Tribuna di Galileo, from an old engraving (<i>see page 149</i>)	XLI

ILLUSTRATIONS

	PLATE
Cippo, on the Pincio, Rome, near the Villa de Medici (<i>see page 151</i>)	XLI
Proposed Entrance to Campanile, Venice, in Memory of Galileo, from the lithograph of G. Pividor (<i>see page 152</i>)	XLII
Bust and Mural Inscriptions on front of Viviani's House, Florence, from an old engraving (<i>see page 155</i>)	XLIII
Galileo's House in Bellosguardo, 1617 to 1631 (<i>see page 156</i>) . . .	XLIV
Galileo's House (Il Gioiello), in Arcetri, 1631 to 1642 (<i>see page 158</i>)	XLV
Galileo's Cottage, Via della Costa, Florence (<i>see page 160</i>) . . .	XLVI

A PERSONAL INTRODUCTION.

It will be useful, indeed necessary, to have a written delineation, mental and physical, of the man with whose portraits and other memorials we are about to become familiar. The best that I know of happens to be my own, which I borrow, slightly amended, from *Galileo: His Life and Work*, London, 1903.

From the biographies of Niccolò Gherardini, the historian, and of Vincenzo Viviani, last and well-loved disciple (Edizione Nazionale, XIX, 646, XX, 624), we learn that Galileo was of a cheerful and pleasant countenance—especially in later life, square of frame, well proportioned, and above the middle height. His complexion was fair and sanguine, his eyes blue and sparkling, and his hair and beard, of which he had an abundance, of a reddish hue.¹ Up to the age of thirty, his constitution was sound, but after his first serious illness, in 1593, he was subject to various complaints, which increased in gravity and frequency as the years rolled on. Thus, for nearly fifty years, he was subject to attacks of fever, hypochondria, and rheumatism; and, latterly, to gout, rupture, and insomnia. Yet, with such a number of ailments as would have made a miserable valetudinarian of any other man, his industry was extraordinary. It was said that no one had ever seen him idle, and one of his favourite sayings was that occupation is the best medicine for both mind and body.

¹ German Anthropologists claim Galileo and a host of great men of Italy, France, and Spain as of Germanic origin. See Ludwig Woltmann's *Die Germanische Abstammung Galileo Galileis*, in "*Politisch-Anthropologische Revue*," Leipzig, November, 1904, p. 508, and Favaro's "*Scampoli Galileiani*," *serie Decimasesta*, Padova, 1906, p. 30. Cf. Gunther's "*Kleine Rassen Kunde Europas*," München, 1925, p. 167-71. See p. 44 *infra*.

His temper was what we would call short, he was easily ruffled, but more easily pacified — a condition which, if not produced, was certainly aggravated by physical suffering and mental troubles, public and private, from which he was seldom free.

He was always fond of a country life. Besides thinking that the city air was prejudicial to his health, he used to say that the city was a prison for the speculative philosopher; that in the country alone was the book of nature open to him who cared to read and learn from it; that the characters in which that book was written were those of geometry; and that when once they were fully deciphered we might hope to penetrate the secrets of nature.

Gardening in all its forms was a favourite (almost his only) relaxation from the studies which filled his days, and often great part of his nights. He was a connoisseur in wines and was diligent in tending his own vineyard. He used to say that wine is a compound of light and humour; and Viviani has preserved his recipe—for wine of the best quality that juice only should be taken which is pressed out by the mere weight of heaped grapes of the ripest kind. All through life he was fond of wine, perhaps sometimes too fond for his health and temper; and even in old age, apparently, the taste was as keen as ever.

He was fond of the society of friends, to whom he dispensed a hospitality simple but hearty. In other expenditure he observed a just mean between avarice and prodigality. He spared no cost necessary for the success of his many and various experiments, and gave freely in charity, and in helping those in whom he saw promise of any kind, some of whom he entertained in his own house.

He seldom conversed on mathematical and philosophical subjects except with intimate friends; and when such subjects were

brought up abruptly by others he showed great skill in parrying and turning the conversation into other channels, and, generally, in a way to satisfy the curiosity of the inquirer. His general demeanour was modest and unassuming. Of self-praise so much is recorded of him that when his sight was failing he would take comfort in saying that of all the sons of Adam none had seen so much as he. He neither depreciated nor envied the talents of other men, but gave to each his due. It was the custom of some of his disciples to speak disparagingly of Aristototele, not so the master; the worst he would say was that the methods of the Stagirite philosopher were not always satisfactory, or that his conclusions were often wrong. Such of the works of Aristotle as he did admire he admired frankly, especially those on Ethics and Rhetoric. He exalted Plato to the skies; Pythagoras he thought unequalled among philosophers; but Archimedes was the only one of the ancients whom he called master. Much of Virgil, Ovid, Horace, and Seneca he knew by heart.

The Sonnets of Petrarch, the Rime of Berni, and the heroic stanzas of the Orlando Furioso he could repeat in great part. His excessive admiration of Ariosto made him unfair to the merits of Tasso, but with time his criticism receded from the violence of youth, and he would say that Tasso appeared to be the finer poet, but that Ariosto gave him the greater pleasure.

Of his *Obiter Dicta* not many have been preserved. To those already quoted the following may be added:—The geometer's slate is the true philosopher's stone; and the book of philosophy is the book of nature which lies open before us, and is written in characters of geometry. Not to know, then, geometry is to be ignorant of nature. Another favourite aphorism conveying the same truth was *Ignorato Motu Ignoratur Natura*. He used to say that he had never met a man so ignorant that something might

not be learnt from him; again, that ignorance in others was his best teacher, for in learning how to combat ignorance he taught himself; that nature does much with little, and that all her works, great and small, are equally marvellous; that benefits should be recorded in bronze, injuries in air; and that those who do an injury never forgive the injured one.

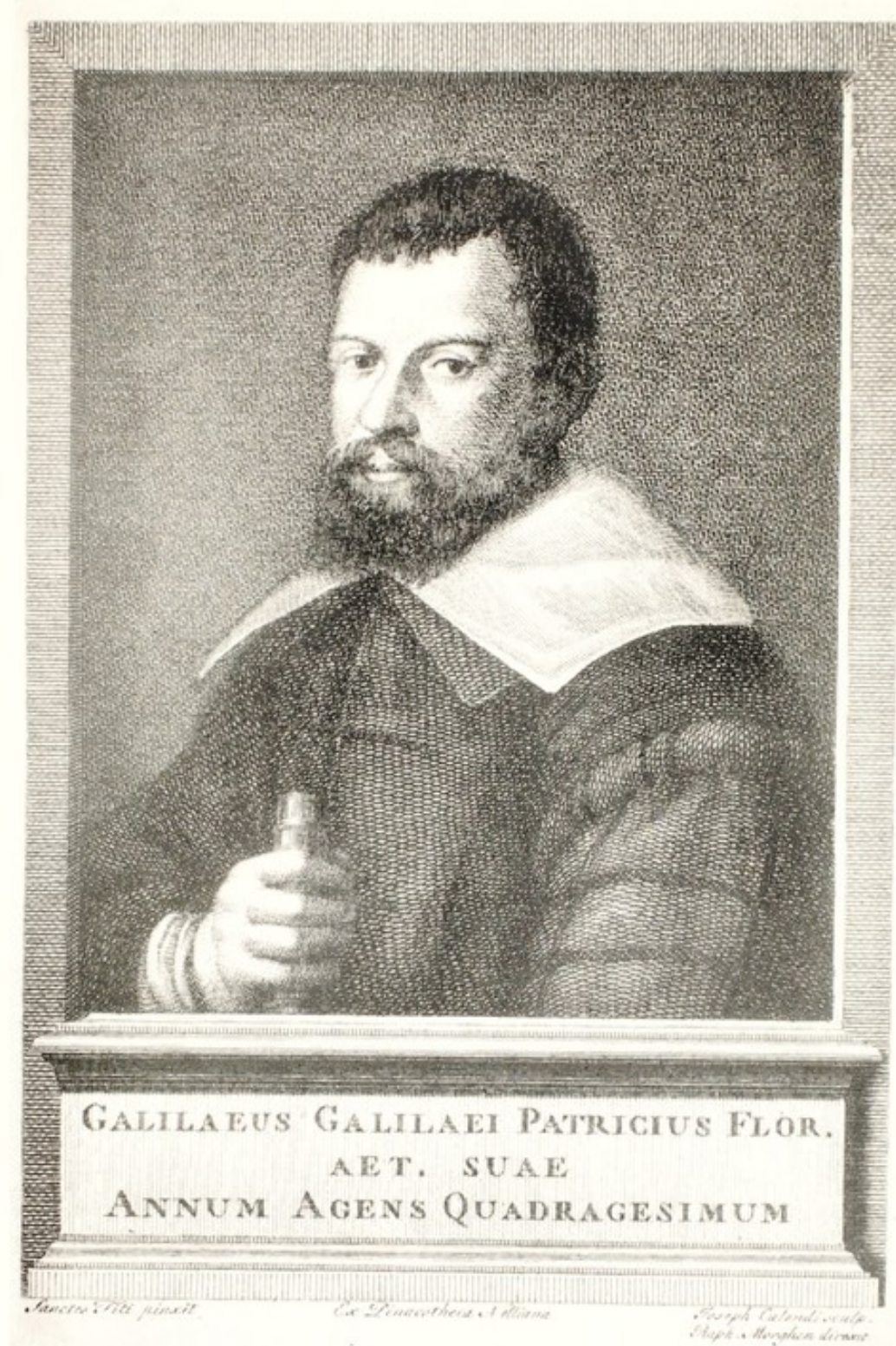
Forgiveness to the injured does belong,
But they ne'er pardon who have done the wrong.

Dryden: Conquest of Granada.

As a teacher he was no less loved than as a friend. It was said of him that he never concealed his knowledge of useful things, but freely imparted it to all who were willing to learn; and, however clear a subject might be to his own mind, he was not satisfied till he made it clear to the minds of his pupils. "His genius," says Luca Valerio, himself a distinguished mathematician, "was not inferior to that of Archimedes"; "From Signor Galileo," wrote Marsili in 1637, "I learnt more in three months than I did in as many years from other men"; "I thank God," says Aproino, "for giving me as Master the greatest man the world has ever seen"; "When," wrote Ciampoli after his downfall in December, 1632, "shall I embrace you as a father and listen to you as an oracle?" Gherardini and Viviani are equally enthusiastic; and even some of his bitterest enemies, as Lagalla, Grassi, and Berigard, have conceded his greatness in this respect.

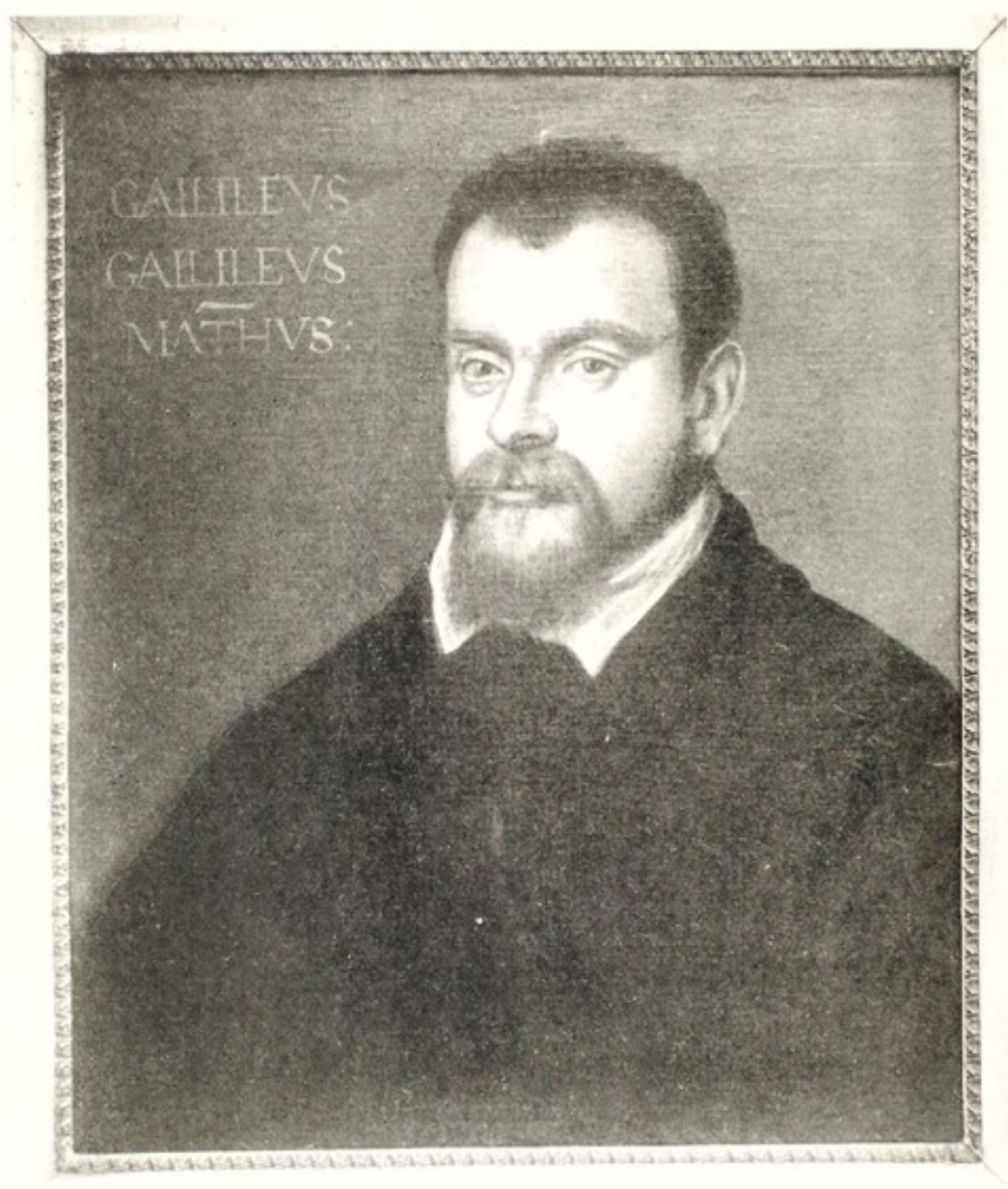
During the summer of 1636 Galileo's eyesight began to fail. By the end of June, 1637, the sight of the right eye was gone, and that of the other grew steadily dimmer and dimmer until early in the following December, when he became totally blind. "The noblest eye is darkened," wrote Castelli, his earliest disciple and life-long friend, "which nature ever made—an eye so privileged

PLATE I.



Portrait by Santi di Tito. From an engraving by Joseph Calendi.
(See page 9).

PLATE II.



Portrait by Domenico Tintoretto in possession of Mr. G. H. Gabb,
London.
(See page 10).

and so gifted that it may with truth be said to have seen more than the eyes of all who are gone, and to have opened the eyes of all who are to come."

The last few months of Galileo's life were soothed by the devotion of his friends, and the homage of all to whom his fame was known. The Grand Duke, or some member of his family, was most attentive in visits and inquiries. Castelli joined him towards the end of September, 1641, intending to stay to the end, but he had to return to his official duties in Rome early in November. Towards the middle of October, Evangelista Torricelli, then a rising philosopher of thirty-three, came to stay at the villa, and did not leave it until he followed the coffin of his master.

The young Vincenzo Viviani, who had joined Galileo's household in the summer of 1639, being then eighteen years old, was, of course, also present. Almost from the first day a strong attachment sprang up between the two, the old master conceiving a fatherly affection for the talented boy, and the pupil a love and veneration for the master which he preserved through a very long life. In his old age, when in his turn he had acquired a claim to the reverence of another generation, our Royal Society, in electing him a member (1696), appear to have felt that the complimentary language in which they addressed him as the first mathematician of the age would be incomplete without an allusion to the friendship that gained him the proud title of "the last disciple of Galileo."

Towards the close Galileo suffered much from local pains, palpitation of the heart, and insomnia; but in the intervals he passed hours in discussions with Torricelli and Viviani, who shared between them the bedside duties of companion and amanuensis. These discussions related to some debateable problems

in mechanics, especially to what he called "the wonderful and hitherto unsuspected Force of Percussion."

On the evening of January 8th, 1642, Galileo breathed his last, at the age of nearly seventy-eight, fortified by the last rites of the Church and "the benediction" of Pope Urbano VIII.

His son Vincenzo and his wife, Torricelli and Viviani, and the parish priest of Arcetri were around his bed.

PART I
PORTRAITS FROM LIFE.

I

PORTRAIT OF GALILEO
BY HIMSELF.

At the head of our work we must dispose of a portrait said to have been painted by Galileo himself, which is referred to by Drinkwater-Bethune in his *Life of Galileo*.¹

This is very improbable, but not impossible, for we know that as a boy he showed great skill in drawing and painting, and in later life he used to tell his friends that, had circumstances permitted him to choose a career, he would have elected to be a painter. The illustrations in his *Sidereus Nuncius*, Venezia, 1610, were all drawn by himself; and Favaro has published for the first time some of his water-colour sketches.² So well known was his talent as draughtsman and colourist that celebrated artists, as Lodovico Cigoli, Alessandro Allori, Domenico Cresti (Passignani), and Jacopo da Empoli, sought his advice and criticism of their work. Cigoli, in particular, was wont to say that Galileo alone had been his teacher in the art of perspective, and that whatever credit he enjoyed as a painter was due to his advice and encouragement. And Lanzi, in "*History of Painting in Italy*"

¹ In "*Library of Useful Knowledge*," London, 1833, p. 103.

² "*Edizione Nazionale Delle Opere di Galileo*," Vol. III, pp. 48, 63-67.

(Bohn's Edition, Vol. 1, p. 210) includes, among the circumstances which helped the rise and progress of the reformed Florentine School, "the readiness with which the celebrated Galileo imparted to artists his discoveries and the laws of perspective."

Salusbury, our only authority for this portrait, says:—"He (Galileo) did not contemn the other inferior arts, for he had a good hand in sculpture and carving; but his particular care was to paint well. By the pencil he describes what his telescope discovered — in the one he exceeded art, in the other nature. Osorius, the eloquent Bishop of Sylva, esteems one piece of Mendoza's (the wise Spanish Minister) felicity to have been this, that he was contemporary to Titian, and that by his hand he was drawn in a fair tablet. And Galileus, lest he should want the same good fortune, made so great a progress in this curious art that he became his own Buonarota, and, because there was no other copy worthy of his pencil, he drew himself."¹

We agree with Drinkwater-Bethune in thinking that, as no other writer makes any allusion to such a portrait, it is more likely that Salusbury should be romancing than that so interesting a work should have disappeared without leaving a trace.

¹ "Mathematical Collections and Translations," 2 vols., London, 1661 and 1665. Part II of Vol. II contains a "Life of Galileo" in five books. Most of the copies of this part were destroyed in the Fire of London in 1665, and very few perfect copies exist. One is now in the library of the Earl of Macclesfield, from which Drinkwater-Bethune copied the passage in the text. A similar story is told about Copernicus. "In 1584, Tycho Brahé received as a present from the Chapter of Frauenburg the Ptolemaic Scales made by Copernicus, together with a portrait of him, said to have been painted by his own hand." "Distinguished Men of Modern Times," New York, Harper & Brothers, 1844, Vol. I, p. 74.

II

PORTRAIT

BY SANTI DI TITO, 1538-1603.

This was painted (in *Un Piccolò Quadro*) about 1601, and is the earliest known portrait of Galileo, who was then in his thirty-eighth year. About the middle of the eighteenth century, it came into the possession of Gio. Batista Nelli, and, probably, before that was one of a number of portraits of famous mathematicians, geometricians, and astronomers, which Viviani had collected, but which were miserably dispersed after his death in 1703. In the misfortunes which overwhelmed the family of Nelli himself, after his death in 1793, the picture disappeared, and has not been heard of since. We know it only by an engraving in copper which was done by Joseph Calendi (*Raph. Morghen direxit*) as a frontispiece to Vol. I of Nelli's "*Vita e Commercio Letterario di Galileo*," 2 vols., Losanna, 1793.

In this print it will be seen that the right hand holds a telescope, which, clearly, could not have been in the original painting, as Santi di Tito died in 1603, that is, six years before the instrument was invented (in 1609). So we must conclude, with Favaro, that the telescope is a later addition by some unthinking admirer. It will also be noticed that a kind of wart is shown on the left cheek—a characteristic which is seen, more or less clearly, in all Galileo's portraits from life, and in many later productions.

Santi di Tito was a favourite pupil of Bronzino, and was reputed to be the best painter of his time in the Florentine School. Many of his works exist in the Churches and Galleries of Tuscany and Rome. See Indexes of (1) Valery's "*Travels in Italy*," Paris, 1852; (2) Murray's "*Central Italy and Rome*," London, 1852; (3) Grifi's "*Saunterings in Florence*," Florence, 1899.

REPRODUCTIONS.

The engraving has been reproduced (1) by Favaro as frontispiece to his commemorative volume, "*Il Terzo Centenario di Galileo in Padova*," Firenze, 1892; and (2) by Fahie in "*Galileo: His Life and Work*," London, 1903.

III

PORTRAIT

BY DOMENICO TINTORETTO, 1562-1637.

This picture was painted about 1605-06, when Galileo was forty-two years old, and is the second of our known portraits. It was preserved in Italy up to the first quarter of the last century, for an engraving after it is prefixed to Dr. Ferrario's "*Life of Galileo*" in Bettoni's "*Vite e Ritratti d'Illustri Italiani*," Milano, 1812-1820. The engraving is inscribed: Dom. Tintoretto dip. G. Bossi dis. P. Bettoni. N. Schiavoni inc.

It has been my good fortune to trace this picture to England and its subsequent history in this country. In "*Notes and Queries*" (10th Series, p. 426) there is a letter about a painting in oils of Galileo, in which the writer says:—

"It appears to be of considerable age, and in the left-hand top corner there is an inscription as follows:—

Gallileus
Gallileus
Math'us.

"In Beeton's '*Dictionary of Universal Information*,' 1861, there is an engraving which resembles this picture, except that it bears no inscription. The head is turned to the left in both." On

inquiry I learnt that the picture was "picked up" by Mr. Reeve (father of the late Henry Reeve), who died early in 1913, aged seventy-five. This would fix the date of arrival in England at about 1835. On the death of Mr. Henry Reeve the picture passed into the possession of his executors, and thence, in 1919, into that of Mr. G. H. Gabb of Hampstead, who "bought it in a speculative spirit."

In 1917 I tried to find a suitable and permanent home for this picture in some scientific institution or other, but everywhere it was rejected as a poor copy of a poor work by a poor artist. As to its artistic merits I am unable to judge; but I do not think that Domenico Tintoretto was a poor artist. He was the son of Jacopo Robusti (Il Tintoretto), his best pupil, and long-time assistant, and would be better known and appreciated but for the dazzling splendour of his father's work. I doubt, too, that the picture is a copy, and for these reasons: (1) Assuming the date of it to be about 1605-06, Galileo was then a professor in Padua, well known, of course, in University circles in Italy, but he had not yet come into the category of great and world-famous men, copies of whose portraits would be desired. (2) If an enthusiastic admirer wanted such a memento, surely, he would not select the poor work of a poor artist, while portraits of the Galileo-become-famous by Sustermans and others were available. If, then, there is no copy, this work must be original.

I would draw attention to the inscription, which shows that the work was done *before* 1609, the year in which Galileo invented the telescope, and directed it to the heavens with stupendous results. He was then simply "Math'us"; but *after* 1609 he became the world-famous astronomer. It also shows that the work was done in Venetian territory, and by a Venetian artist. The first L in both names is doubled—a way of spelling which was peculiarly Venetian. It occurs in all the Rotoli of the Padua

University, and other official documents; while Galileo himself always used one L, and this was the universal practice outside Venezia.

Examined with a good lens, it will be seen that the dress is similar to that shown in Santi di Tito's picture.

IV

PORTRAIT

BY LODOVICO CIGOLI, 1559-1613.

A paragraph in a letter from Luca Valerio to Galileo, dated April 4th, 1609, says:—"It is now eight days since I received your letter through signor L. Cigoli, our common friend and most excellent painter. He has brought me your portrait painted by himself as he only knows how to. Having you always in my heart, certainly it is for me a most acceptable offering."

Beyond these few lines we know absolutely nothing of this work—a fact all the more extraordinary when we call to mind that the two men, Galileo and Cigoli, were for years on intimate, and even affectionate, terms. In the *Carteggio Galileiano* there are no fewer than twenty-nine letters from Cigoli, ranging from April 9th, 1609, to May 3rd, 1613, relating almost entirely to Sun-spots, and the angry polemics which they were causing in Rome; but never a word about the portrait.

The painter's name occurs frequently in Galileo's *Letters to Welser on Sun-spots* (*Macchie Solari*), where he is described as a most famous painter and architect. He was a great admirer of Galileo's early discoveries in the heavens, and was the first to apply them in his art. His celebrated fresco of the Virgin in the Cupola of the Borghese Chapel in Santa Maria Maggiore, Rome, is a notable instance. The Virgin is standing on the half moon, its

PLATE III.



Portrait by Francesco Villamena. From an old engraving.
(See page 14).

PLATE IV.



Portrait de l'Ecole de Cristofano dell' Altissimo.
From an old woodcut.

(See page 17).



Pencil Drawing of same.

(See page 18).

hills and valleys painted as the telescope of the day revealed them. This conceit, employed later by Murillo and Rubens in a less obnoxious form, was denounced at the time as a "desecration of sacred subjects—a logical result of the new astronomical heresies."

Seeing that Cigoli wrote a book specially on the laws of perspective as learnt from Galileo, it is curious to note Lanzi's criticism of this work. "In this composition Cigoli appears to great disadvantage, owing to some oversight in point of perspective which, notwithstanding his earnest entreaties, he was not allowed to correct. Indeed, if this work had perished, and if his oil-painting in the Vatican had come down to us uninjured, this great Artist would have enjoyed a higher reputation."¹

In another way Cigoli showed proofs of his indebtedness to Galileo's teaching. We have recorded above (p. 7 *supra*) his acknowledgments in the matter of perspective. The teaching was thoroughly digested and gave ample fruit, for, besides the evidences in his numerous paintings, he published several tracts on the subject, and designed an instrument for drawing objects, which differed from preceding contrivances in that it gave the perspective on a horizontal plane. It was, in truth, the precursor of modern apparatus of this kind.

V

PORTRAIT

BY FRANCESCO VILLAMENA, 1566-1626.

Although a capable painter, Villamena is better known for his engravings, of which he executed in all about 360 plates. His

¹ Murray's "Rome," 1850, p. 404. The work in the Vatican, here referred to, is St. Peter Healing the Cripple, and is considered his masterpiece. It is practically destroyed by damp.

technique is peculiar (*sui generis*), and some of his productions are suggestive of caricature. Among his best works are Galileo, Cardinal Bellarmine, Christian IV of Denmark, and several Saints.

The portrait of Galileo is known to us only as an engraving in copper, which appeared as frontispiece to "*Istoria e Dimostrazioni Intorno Alle Macchie Solari*," Rome, 1613. The same print was prefixed to "*Il Saggiatore*," Rome, 1623, and in both cases without any indication of author's name. Since then numerous reproductions have been made, of which I here note the more important.

REPRODUCTIONS.

(1) "*Opere Di Galileo*," 2 vols., Bologna, 1655-56. Here for the first time the print is inscribed F. Villamoena fecit. (2) Venturi, "*Memorie E Lettere Di Galileo*," Modena, 1818-21, where the plate is inscribed Fieronì inc. (3) Bernegger's Latin edition "*Systema Cosmicum*," Augustae Treboc, Elzeviriorum, 1635, engraved by Jac. ab. Heyden. (4) Same as (3), but published in Lugd. Bat. 1641. Engraved by Cl. Audran. This print differs somewhat from the original. The likeness is good enough, but the face is turned to the right, and there are differences in detail of the ornamental border. The inscription runs thus:—Galileus Galilaei Lynceus Philosophus et Mathematicus Ser^{mi} Hetruriae Magni Ducis. (5) Same as (4), but a later edition published in 1700. This print is inscribed J. Mülder fecit. (6) Lorenzo Crasso, "*Elogi D'Uomini Letterati*," Venetia, 1666. There is no inscription, but in the Hope Collection of Engraved Portraits, Oxford, there are two loose copies each of which is inscribed N. de Larmessin Sculp. (7) Isaac Bullart, "*Academie des Sciences et des Arts*," 2 vols., folio, Amsterdam, 1682 (republished in same form Bruxelles 1695). In Vol. 2, p. 131, of both editions there is an engraving, evidently after Villamena, but a poor

imitation. The print is subscribed *Galileus Galilaei Lynceus Philosop. et Mathema.* N. de Larmessin sculp. (8) In the Hope Collection, Oxford, there is a Grangerised copy of Lempriere's "Universal Biography," London, 1808. It has a short biography to which is prefixed a poor print after Villamena. There is no indication of the engraver's name, but it is inscribed:—

V. [sic.] Galilée

Né en 1564. Mort en 1642.

(9) Duplessis, "Catalogue Des Portraits au Département des Estampes de la Bibliothèque Nationale," Paris, 1899. The portrait of Galileo is incised by G. P. Benoist after Villamena.¹

Up to 1912, the attribution of this portrait to Villamena had been unquestioned, but in that year Professor Favaro sounded a word of warning, in suggesting that our nomenclature is, possibly, wrong—that what has been called Villamena's may be, after all, the work of quite another hand. He stresses the fact that the first two appearances in print (1613 and 1623) bear no indication of the author's name; and experts, who have compared those prints with the engraved title-page of "*Il Saggiatore*" (undoubtedly Villamena's work), have decided that the portrait "*non si direbbe dello stesso bulino del frontespizio.*" In 1919 Favaro discovered a new fact, which helped to strengthen his first doubts. In a fresh study of old papers relating to the controversy which followed the publication of "*Macchie Solari*," he found a passage stating that the portrait prefixed to that work was procured through the good offices of the painter Cigoli (who had much to do in preparing the book for the press), and that it was incised by Greuter, to whom all the figures in the text were likewise due.

If, then, it is not by Villamena, would it be rash to suggest that it is by Cigoli himself—that, in fact, it is an engraving after

¹ Loose impressions of some of these prints can be seen in the British Museum (Print Room). See list, p. 40 *infra*.

the portrait which he painted as Galileo's present to Valerio in 1609, and of which we have lost all trace (see p. 12 *supra*). But in that case we are left without a portrait by Villamena, with which, on the other hand, Bryan and Gandellini, in their "Dictionaries of Painters and Engravers," distinctly credit him. Favaro has left the question undecided, and so must I.¹

VI

PORTRAIT

DE L'ÉCOLE DE CRISTOFANO DELL'ALTISSIMO.

It is known that about 1618-19 Galileo had agreed to exchange portraits with his Venetian friend, Gian. Francesco Sagredo, whom he afterwards immortalised as one of the three interlocutors in his celebrated "Dialogo Sopra I Due Massimi Sistemi Del Mondo," Fiorenza, 1632.

Sagredo duly carried out his share of the compact. Writing on November 3rd, 1618, he says:—"I have commissioned Il Bassano to paint my portrait; but he works so little, and is pestered by so many others, that one must have the patience of Job, and I do not know if you will be content to wait so long." As a matter of fact, the head only was done by Il Bassano, the rest, showing Sagredo in uniform as Venetian Consul at Aleppo, being the work of Girolamo, Bassano's brother. The painting was begun in Venice in October, 1618, was finished in May, 1619, and reached Florence in the following June.

¹ It is relevant to note that in 1611 and 1616 Galileo was in Rome for short periods, and that in the interval he was detained in Florence, immersed in the storm raised over the theological bearings of his astronomical discoveries, and culminating in his first encounter with the Inquisition in 1616. As far as is known, Villamena was never in Florence. How then could he have painted and engraved the 1613 portrait here under discussion?

PLATE V.



Portrait by Ottavio Leoni. From his own Engraving.
(See page 20).

Galileo preserved this as a precious memento of his friend; and after his death it came into the possession of Viviani, together with a large number of MSS., books, portraits, etc., of Galileo and his School. At Viviani's death in 1703 these valuable papers passed to his heirs, the brothers Panzanini, and were soon miserably dispersed.¹ Before dispatch from Venice a copy was procured by Marco Foscarini, Procurator of Venice, "made," as he says, "from the original canvas, of life size." Unfortunately, of both original and copy nothing is now known.

Of Galileo's portrait intended for Sagredo nothing whatever is known. All his letters (over one hundred) to Sagredo are lost, and there is no reference to the picture in those of Sagredo which have come down to us.

Assuming, however, that Galileo fulfilled his part of the agreement, it is possible that we have his portrait in the print here reproduced. About 1800, the original of this print was in the possession of Abate Rivani of Florence, a well-known connoisseur. About the same time M. Alexis François Artaud de Montor was French Chargé d'Affaires at the Court of Tuscany (1807), and, being himself a connoisseur and collector of *Objets d'Art*, he acquired several of the Abate's treasures, among them this picture of Galileo. He took it with him on his return to France, and many years later (in 1845) he published "Italie,"² in which he gives a short and appreciative notice of Galileo, accompanied by a small reproduction of his "find" (Plate 63). As to this he says: "Le portrait que nous offrons ici a été gravé d'après un tableau de l'école du peintre Cristofano dell'Altissimo. Nous avons rapporté de Florence ce tableau, qui représente avec beaucoup d'expression et de vérité les traits de Galilée, tenant sa lunette à la main" (p.

¹ As told in my "Galileo: His Life and Work," pp. 427-429.

² One of the series "L'Univers Pittoresque," Firmin Didot Frères, Paris, 1845.

291). From Galignani's "Paris Guide," 1839, we learn that M. Artaud had a fine collection of paintings, statuary, antiquities, and curiosities, in his house, No. 36, Rue Bellechasse, Paris, and, doubtless, the Galileo portrait was among the number, but where it is now I am unable, after much searching, to say.

Artaud's reproduction is a small wood engraving, wretchedly done, and not in the least answering to his own description of the original. Certainly, it is not like Galileo in his prime, and as he is depicted in contemporary portraits. Possibly, we have a more faithful copy, so far as it goes, in a pencil drawing (head and bust only) which I "picked up" in Dinan, Côtes du Nord, many years ago. The likeness is there unmistakably, but the beard is unusually long and tapering, and the characteristic wart is on the wrong cheek, the right instead of the left. Unfortunately, there is no inscription or other indication of any kind to help one in forming an opinion as to the original, but to me, who am familiar with Galileian portraits, it seems to have been copied from, or to have been suggested by, an early picture, which may very well be "*de l'école du peintre Cristofano dell' Altissimo.*" I reproduce the drawing in the hope that some reader will be able to identify it. Montor (or Montoir), the place-name of M. Artaud, is in Brittany, and not very far from Dinan. Is there any significance in this?

VII

PORTRAIT

BY OTTAVIO LEONI, 1582-1634.

Ottavio Leoni came of a Paduan family, and hence is often referred to as *Il Padovanino*,¹ but he was born and spent all his life in Rome.

In April, 1624, Galileo went to Rome to do homage to Cardinal Maffeo Barberini, now Pope Urbano VIII, still his friend and admirer, but soon (1632) to become his enemy and persecutor. Galileo hoped at the same time to use his influence with the new Pope so as to obtain, at least, some toleration for the Copernican doctrine, now no longer subject to the weighty opposition of Cardinal Bellarmine, who died two years before. During the six weeks of his stay in Rome he had six long interviews with his Holiness, and was allowed to bring forward all his arguments; but all to no purpose. The Pope was always most affable, listened attentively to Galileo's pleading, but would hold out no hope of relief from the ban of March 16th, 1616. He did not approve of that ban, had he been Pope it would not have been imposed, but there it was, and there it must remain.

It was during this fruitless visit that Leoni painted the portrait of Galileo, of which there remains no trace, and we know it only from crayon drawings, and an engraving after it by the artist himself. Leoni seems to have specialised in portrait painting, and became famous for his accurate likenesses. Having thus, in the course of a short working life, painted the portraits of many of his distinguished contemporaries, he had the happy idea of engraving them in a uniform style, and publishing them in a

¹ Not to be confounded with the painter Alessandro Varotari, 1590-1631, who, also, was called *Il Padovanino*. Bryan's "Dictionary of Painters," and Mrs. Jameson's "Handbook to the Public Galleries of Art in and near London" mention yet another—Francesco Padovanino of the Venetian School, 1552-1617.

volume of 32 plates. He certainly engraved many, if not all, but he does not appear to have completed his full design, for we can find no trace of publication in a collected form. Fortunately, we have a near approach to it in a collection of 27 crayon drawings, which, apparently, belonged to Leoni himself¹; and which is now preserved in the Biblioteca Marucelliana in Florence. In this precious volume there are portraits of fourteen painters, Leoni himself heading the list; of three sculptors, of which his father's is the second; of two mathematicians, of which Galileo's comes first; and of eight poets.

Plate V is a reproduction of Leoni's engraving after his Galileo portrait. Like all his other work, the technique is peculiar; the hair, beard, and drapery are done in single strokes, which, in the case of hair and beard, are, perhaps, too suggestive of bristles; the face is delicately done with dots; and the background is dotted for the lighter part, with cross strokes for the part in shadow.

The drawing in the Biblioteca Marucelliana, from which, presumably, this engraving was done, is a more pleasing performance. The Misses Horner, who had the rare privilege of inspecting the volume, refer to it in their "Walks in Florence," London, 1873. Omitting a few inaccuracies into which they have fallen, they say in effect:—"One of the most interesting volumes here contains upwards of twenty portraits drawn in crayon by Il Padovanino. The most remarkable are Annibale and Agostino Caracci, Michel Angelo da Caravaggio, Guercino, Cesare d'Arpino, Simon Vouet, and Galileo, which last seems to convey

¹ I infer this from an autograph note at the end of the List of Contents as follows:—"Ottavio Leoni, Romano, detto il Padovanino, della mi mano sono questi ritratti [sic] di Virtuosi illustri del suo tempo." I have had no opportunity of seeing this collection, but the few facts I give concerning it I owe, mainly, to the courtesy of sig. Cav. Antonio Bruschi, Director of the Biblioteca Nazionale Centrale, Florence.

PLATE VII.

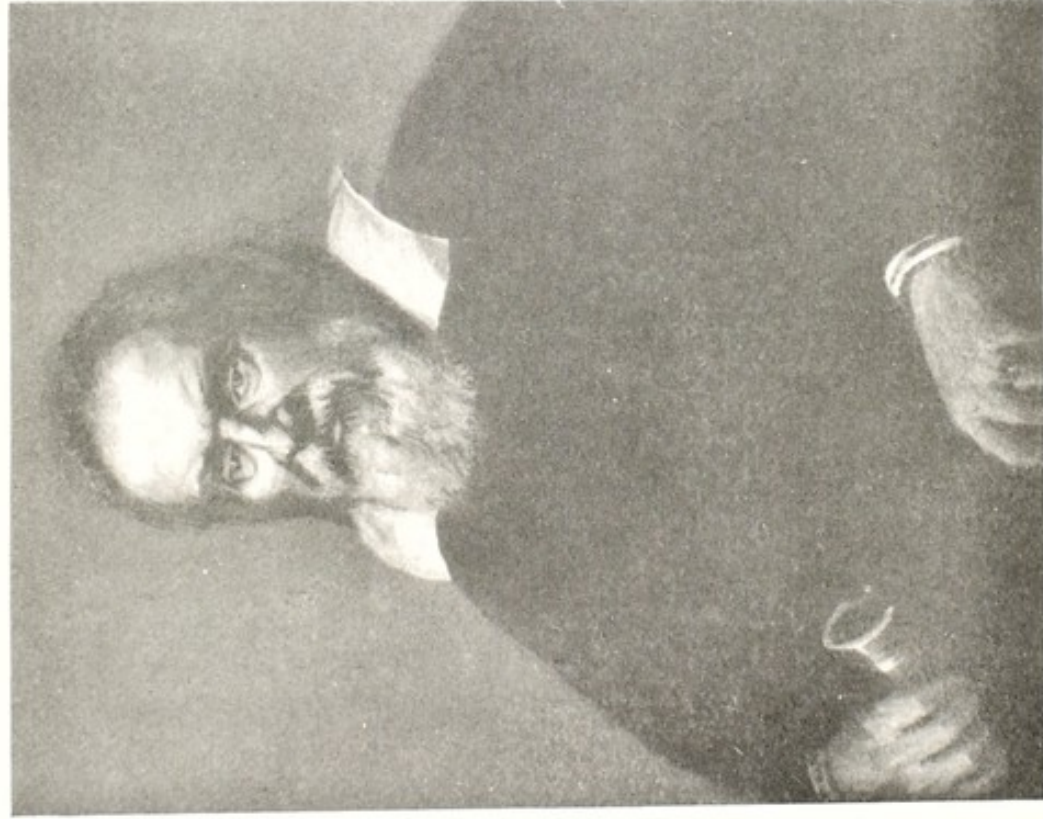


GALILEO GALILEI

*Al. Sua Eccellenza il Sig. Principe di Ruden
Consiglier intimo attuale di S. M. Britannica Re di Gran Bretagna suo Augusto serenissimo
& Reale Principato profuso la S. Sede gran Croce dell'Ordine del Giarretto &c.
di Roma il 24. di Aprile 1664. L. B. Bettellini sculpsit.*

Portrait by Passignani. From an engraving by Pietro Bettellini.
(See page 24).

PLATE VIII.



From Passignani's Original in the Lansdowne Collection, London.
(See page 26).



Passignani's replica. From the renovated picture in the Museo Galileiano, Torre del Gallo, Florence.
(See page 29).

a far more lifelike, and, therefore, truer idea of the man than the portraits of him in oil; the forehead is singularly high; the small blue eyes are full of animation; and, though the features are coarse, there is a nobility of soul in the calm serious expression of the great philosopher" (Vol. 2, p. 143).

An almost identical drawing is preserved in the Louvre, Paris (Musée des Dessins), and, if I am not mistaken, it is the very one which Leoni submitted to Galileo for approval, and which remained in his possession, as shown by his autographic inscription. Being, therefore, of more than ordinary interest, I reproduce it here, Plate VI. In the left-hand bottom corner is written 296 and along the bottom line

Maggio,

1624

Galileo Galilei fiorentino.

The handwriting in both places is the same, and, to me, is undoubtedly that of Galileo in his prime. He was in Rome from April 23rd to June 8th, so that the word Maggio may mean the month in which the drawing was done. But what may signify the figures 296 above Maggio? On drawing Favaro's attention to this inscription, he took it as an indication that the drawing at one time belonged to Galileo. "Questo farebbe dunque credere all'esistenza di un esemplare del disegno firmato da Galileo stesso!"¹

Returning to the Marucellian volume, we desire to make brief references to two of the other exhibits, because of the parts their originals played in some of the stormy episodes of Galileo's life. Curiously enough, his immediate neighbour in this pictorial Walhalla is the famous Jesuit father, Cristoforo Scheiner, his bitter and persistent enemy in the flesh. Scheiner was Professor

¹ In the British Museum (Print Room) there is an early photograph (much faded) of this drawing.

of Mathematics at Ingolstadt, and was the protagonist of the Jesuits in their onslaughts on Galileo. He claimed to have discovered a fifth satellite of Jupiter, and to have observed the sun-spots before Galileo—as to which an amusing story is told. On communicating his (supposed) observation to the Provincial of his Order, the latter replied:—"I have read Aristotle from end to end many times, and I have nowhere found anything at all resembling what you describe. Go, my son, tranquilise yourself; be assured that what you take for spots on the sun are faults of your glasses, or of your eyes?" Scheiner's letters on this subject, which were only allowed to appear anonymously, called forth a crushing reply from Galileo, published under the title "*Istoria E Dimostrazioni Delle Macchie Solari*," Roma, 1613.

As if to compensate for the uncongeniality of his co-representative of the mathematics, Galileo has close by his staunch friend and correspondent, Monsig: Ciampoli, here the first of the poets! Giovanni Ciampoli was born of humble parents in Florence in 1590, and, in due course, passed brilliantly through the schools of Pisa, Padua, and Bologna. In 1614 he decided to seek his fortune in Rome, was there ordained priest, and quickly rose to positions of considerable dignity in the Church—ending as Secretary of Briefs to Popes Gregorio XV and Urbano VIII. As a young man of promise, he would be on friendly, perhaps intimate, terms with Leoni, the popular painter, and to this circumstance, no doubt, we owe the inclusion of his portrait among the great poets of the time, for, according to Tiraboschi, his poetic attainments were but mediocre. Whatever may be his merits as a poet, Ciampoli will always be remembered by Galileian scholars as one of a small band of devoted friends of the master in Rome through all the storms of 1614 to 1632—culminating in the catastrophe of Galileo's forced recantation, the banishment of Ciampoli for the rest of his life to obscure and distant parts

of the Papal States, and the summary dismissal of minor actors in what Italian historians call "the disgrace of the century."

REPRODUCTIONS.

(1) Félix Polanzani: *Collection de Differents Portraits d'Hommes Illustrés dans les Sciences et dans les Arts*. Choisis, dessinés, et gravés par Félix Polanzani, Rome, 1780. (2) Daumont et Desrochers: *Portraits*, Part E-L, Paris, chez Daumont. This is a large folio volume in that magnificent storehouse, the Hope Collection of Engraved Portraits, Oxford. The engraving, clearly after Leoni, is inscribed:—

Galilée Galilei, Philosophe et Mathématicien, né a Florence en 1564, et y Mourut en 1642.

Ce Mathématicien Fameux
Fut Doué d'un Esprit Sublime
Dans Ces Ouvrages q'on Estime
Il Nous Apprend L'Ordre des Cieux.

In another print (loose) in the same Collection the plate is inscribed Desrochers sc, the inscription is altered slightly, but the verses are the same. (3) C. P. Landon: "*Galerie Historique Des Hommes Les Plus Célèbres de Tous Les Siècles et de Toutes Les Nations*," 5 vols., Paris, 1805-11. The portrait of Galileo in Vol. 5 is inscribed *Le Padouan fils pinxt. Landon Dirext.* (4) Philarète Chasles: "*Galileo. Sa Vie, Son Procès, et ses Contemporains*," Paris, 1862. (5) Loose prints: (a) one, inscribed *depinto ed inciso da Ottavio Leoni — eseguita dal Braquemond.* (b) In British Museum (Print Room) two examples marked

Anderdon Collection 39, 58.

Italian Portraits 1856, 9.13.281.

(c) In the Victoria and Albert Museum, South Kensington, one example. No inscription. (d) In Département des Estampes de

la Bibliothèque Nationale, Paris, there are two loose engravings, (1) that of Leoni, 1624, and (2) that of Landon, 1805.

VIII.

PORTRAIT

BY PASSIGNANI (DOM. CRESTI), 1560-1638.

"This portrait," says Favaro, "is of great interest as well for the excellence of the work as for the painter's intimate relations with Galileo. His name occurs frequently in the writings of the latter on Sun-Spots, as to which, indeed, he made some creditable observations of his own, following, of course, the instructions of the Master. At one time, Galileo had intended to make honourable mention of Cigoli and Passignani in this connection, and had introduced their names at the beginning of his Third Letter to Welser in 'Macchie Solari'; but at the last moment he suppressed the name of the latter, apparently, because it had come to his ears that he (Passignani) was stealing some of his thunder in Rome, and was giving himself out as the real discoverer! Where is now the original of this fine picture we know not, we can say only that at the beginning of the last century it was in the Gallery of Prince Poniatowski in Rome, and that he procured a large engraving after it, .30m. by .35 m., by Pietro Bettellini, from the drawing of Tommaso Minardi,¹ and dedicated it to the Baron Reden, the Envoy Extraordinary and Minister Plenipotentiary of the King of England (as King of Hanover) at the Holy See.

¹ In 1914, Sig. Rappaport, an art-dealer in Rome, reported the finding of Minardi's original drawing. "It is done," he says, "in chalk, and measures 26½ cms. by 20½ cms. On the back of the carton, on which the drawing is mounted, there is a description of it in German, with dates, etc., of the artist's life. There is another and later note, from which it appears that it was bought in 1867 in Verona from the collection of Dr. Pietro Malenza."

“We cannot say for certain—nay more, I do not believe—that it is the portrait which Galileo had ordered expressly as a present to the brothers Marcello and Matteo Sacchetti, famous Roman Architects, with whom he maintained affectionate relations. Writing on this subject to Galileo from Rome, on July 6th, 1624, Mario Guiducci (an old pupil) says: ‘Sig. Marcello Sacchetti kisses your Excellency’s hand, and, together with sig. Matteo, his brother, begs me to hasten the dispatch of your portrait, which they desire to place with those of other distinguished persons in certain ground-floor rooms, which they are preparing. You know that Cavaliere Marino also desires to see it very much.’ On October 26th following he wrote: ‘Not until today have I been able to get possession of the package containing the portrait . . . As your Excellency says, it is, truly, a fine piece of work, and very like you. I have nothing to add, except to say that you seem to me to be too pale, but, perhaps, you have grown older since you left here’ Finally, on January 4th, 1625, Guiducci informed Galileo that the picture was duly handed over to Matteo Sacchetti” (“Atti Del Reale Istituto Veneto,” Vol. 72).

Here Professor Favaro asks where is now the original of this fine picture, and goes on to say that he does not believe it is the same work as that presented to the Sacchetti brothers; but he gives no reason for this belief. Now, I make bold to say that it is the same work, and that it is still in existence. As to its further history, I assume that it remained in the possession of the Sacchetti family, or at any rate somewhere in Rome, for 200 years, and that about 1820, or earlier, it was acquired by Prince Stanislaus Poniatowski, a nephew of the last King of Poland. In 1802 he was a suitor for the hand of his cousin, Anna (afterwards celebrated as Countess Potocki), of which she says in her Memoirs:—“At the age of fourteen I was to have married Prince Stanislaus Poniatowski, my mother’s brother, but as he was approaching

fifty years, and was lanky, dry, and sober, I would not hear of him, and I withstood the inducement of jewels and a marriage outfit." After this disappointment, his artistic tastes led him to Italy, where many of his remaining years were spent. He had a house in Florence, 20 via Cavour, and two in Rome, (1) Via della Croce, where he had collected a large number of paintings, chiefly of the Flemish School, and a fine collection of gems, rarely visible to strangers, but to properly accredited visitors they were readily shown—the Prince himself doing the part of an affable cicerone; and (2) a beautiful villa on the Via Flaminia, which, including furniture, ancient sculptures, etc., cost him 60,000 scudi, but which he sold in 1826 to a Mr. Sykes for 11,000 scudi!

I assume further that he acquired the Passignani portrait before 1820; for the Baron Reden, to whom he dedicated its engraving by Bettellini, was Hanoverian Envoy at Rome from 1820 to 1825. The Prince died in 1833, aged seventy-nine years, and was buried in the Church of San Marco, Florence, where a fine monument has been erected to his memory. Six years later his pictures were sold in London by Christie and Manson, on February 8th, 1839, and following day.¹ There is no mention of the portrait in the Sale Catalogue, but that need not cause surprise, as in such cases there are likely to be items which some people are looking for, and these are bought privately before the collection is offered for public sale. So, I assume that it was purchased locally by William Spence; and, presently, it was sold by him to the third Marquis of Lansdowne, about 1840. In the Catalogue of the Lansdowne Collection the picture is described thus:—

Florentine School—XVIIth Century.

No. 47. Portrait of Galileo Galilei (1564-1642).

¹ The gems were sold at the same place in April, 1839.

Bust: life size: head turned slightly to the left: grey beard. He is dressed in black, and a broad white collar encircles his neck. In his right hand he holds a telescope.

On canvas, 2 ft. 7½ in. high by 1 ft. 10¼ in. wide.

Exhibited at the British Institution in 1854.

There is a similar but smaller portrait of Galileo in the Pitti Gallery at Florence, No. 106, ascribed to the school of Sustermans, to whom the picture in the Lansdowne Collection was formerly attributed. It does not, however, recall the style of this Master (Dr. J. P. Richter).

Bought by Lord Lansdowne of Mr. Spence.

Here I would remark. If Mr. Spence bought the Poniatowski picture, he must have bought it as a Passignani. Did he sell it as a Sustermans? It would seem that he did, perhaps, on the principle that giving a big name to a thing enhances its selling value. If not, how came it to be ascribed to Sustermans, as it is in the Lansdowne Catalogue, and in the Catalogue of the British Institution for June, 1854, where it was exhibited?

In disproof of this (to me unfounded) ascription, the Lansdowne Catalogue, strangely enough, has a weighty piece of expert evidence. There Dr. Richter says that the portrait was "formerly" attributed to Sustermans, and he adds, "it does not recall the style of this Master." Then, as we have seen, while in the Poniatowski Gallery it was known as the work of Passignani; but this is brushed aside as the mere *ipse dixit* of Poniatowski and his engraver. But, surely, they must have had good reason for ascribing their picture to Passignani. Had there been any room for doubt, and, seeing that a somewhat similar (but later) picture by Sustermans was in existence in Florence, they would have chosen the name of the latter—a name of European reputation—

rather than that of Passignani, of lesser and restricted fame. There is no meaning in attributing a work to a less-known name while another known throughout Europe would jump to the eye. It would not be "good business."

It is a grief to me that Professor Favaro, my guide, philosopher, and friend in Galileian studies, adhered to the last to the common view on this question, and, even after I had told him of the Lansdowne "find," and had shown its connection with the Bettellini engraving, he was unmoved, and, forthwith, added that (to us *new*) picture as a fresh leaf to Sustermans' laurels. Writing on July 19th, 1915, he said:—"As to the Lansdowne portrait there can be no doubt of its derivation from the Pitti picture, though in a manner most diverse. In the Passignani portrait the pose, the expression of the eyes, and, above all, the trim of the hair and beard, are characteristic of that artist, and quite different from the work of Sustermans."

In a strict inquiry this opinion would have little value, for it is vitiated by the fact that Favaro compares a photograph of an original oil painting (the Pitti portrait) with a photograph of Bettellini's engraving after Passignani, which engraving was done from the drawing of Minardi—that is, he compares the work of Passignani (which for him is lost), after passing through two other hands, with that of Sustermans at first hand—clearly an unfair method.

After all, in the absence of documentary evidence, the last word must be with the experts in art, and the eyes will, I think, afford the crucial test. If my contention be right, the eyes in the Lansdowne portrait should be normal, and the eyes in the Pitti portrait should be abnormal—as being those of a blind man.¹

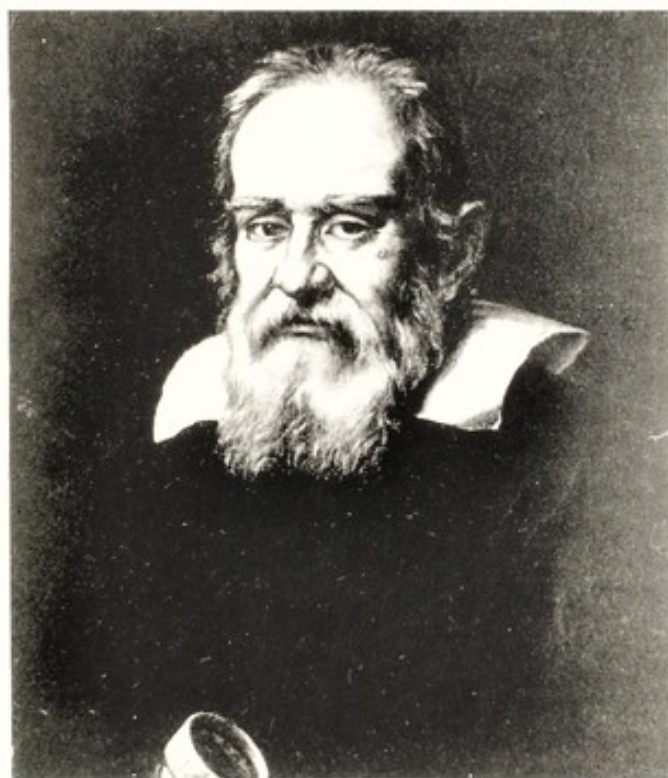
¹ We shall have more to say on this subject when we come to speak of the Pitti picture. See p. 48 *infra*.

PLATE IX.

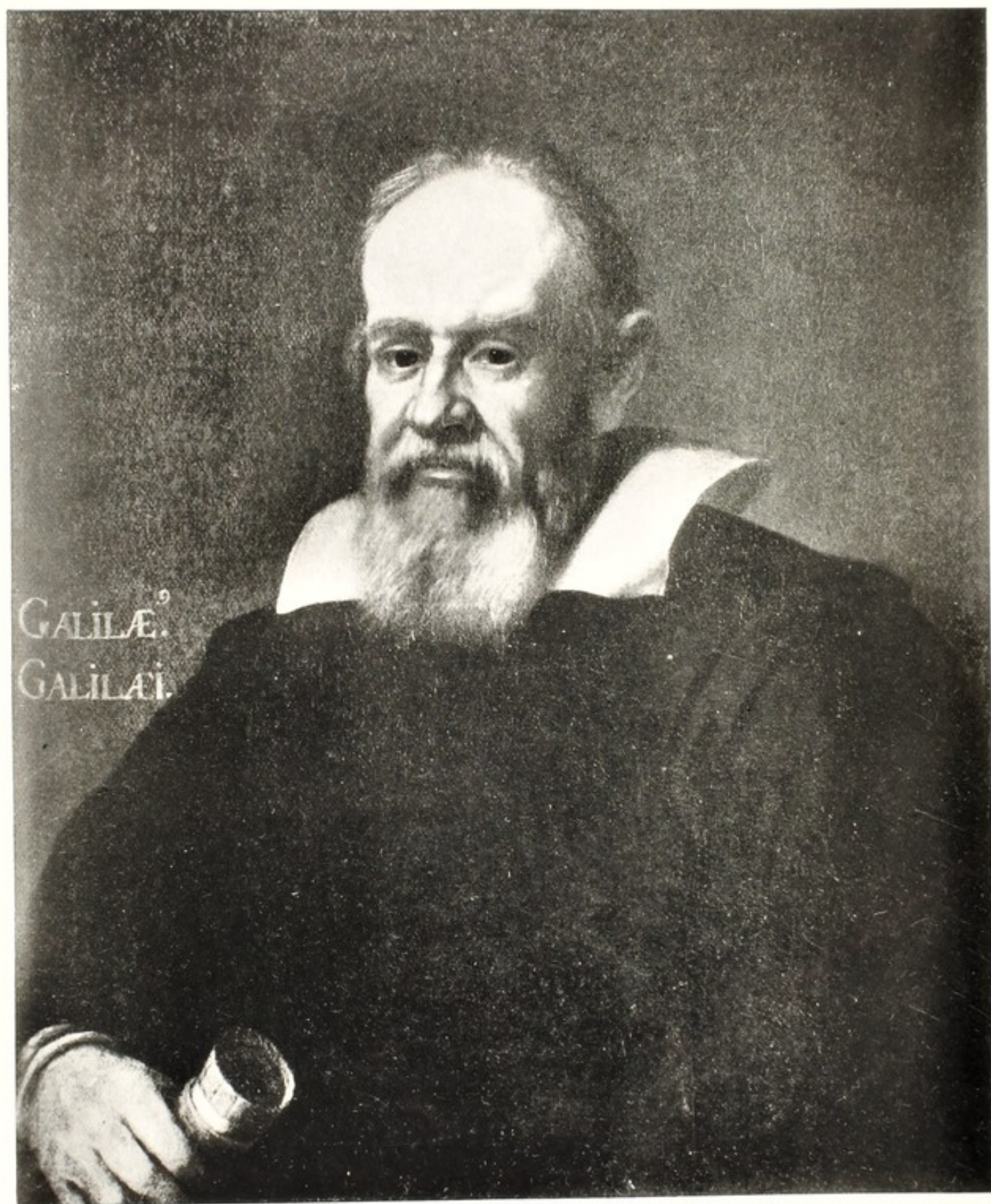


PROSPECTVS AREÆ S. MARIAE SVpra MINERVAM

Dominican Convent, Santa Maria Sopra Minerva, Rome.
From an old engraving, *tempo* Galileo.
(See page 36).



Portrait by Sustermans, 1640, in the Pitti
Gallery, Florence.
(See page 43).



Sustermans' copy of same in the Bodleian Library, Oxford.
(See page 46).

REPRODUCTIONS.

This was engraved for the first time by Pietro Bettellini after a drawing by Tommaso Minardi. There is a fine copy in the British Museum (Print Room) and, occasionally, specimens come into the market. It has been copied more or less fully in (1) "*Maggazzino Pittorico Universale*," Genova, 1836, a lithographic copy. In the Hope Collection, Oxford, there is a similar lithograph, inscribed *Niccolò Fontane dis. Lith. Ridolphi*. (2) "*The Hundred Greatest Men of History*," edited by Wallace Wood, London, 1879-80, Vol. 6; details are not shown, only head and bust in an oval. (3) "*Allgemeines Historische Porträt-Werk*," by Dr. Woldemar von Seidlitz, München, 1889, No. 24; quite a good copy. (4) Oliver Lodge, "*Pioneers of Science*," London, 1893. (5) Ball, "*Great Astronomers*," London, 1895; (6) Fahie, "*Galileo, His Life and Work*," London, 1903; (7) "*Rivista Fiorentina*," Florence, 1909.

IX.

PORTRAIT REPLICA

BY PASSIGNANI.

We must now go back and trace the probable history of a replica of the above. I assume this replica was done before the original left Florence in 1624, and, probably, to the order of Ferdinando II, Grand Duke of Tuscany, who was ever an ardent admirer of his old tutor. It was hung in the Pitti Palace, and, in the course of the next forty years or so, had lost its identity, and had come to be known as the work of Sustermans. So we find it described in an inventory of the pictures at the accession of Cosimo III in 1670. "By the same author [Giusto Sustermans]

the portrait of Galileo, life size, showing the hands, a telescope in one, and a ring on a finger of the other, beard white, collar white, high 1 braccia 6 soldi (32 in. *circa*), wide 1 braccia 1 soldo (23 in. *circa*)."

Very soon after, it must have disappeared from the Pitti Palace, for I trace it to the possession of Viviani, who proposed about 1670-5 to prefix an engraved portrait to a contemplated "Life of Galileo" (which, however, he never carried out). His design was grandiose,—"*Ritratto in rame di Galileo in età di anni 68 circa, in foglio grande, in ovale, o in quadro, con ornamenti di varie imprese, con motti latini, alludenti alle sue principali invenzioni e scoprimenti, ed in piedi per di sotto con l'arme della famiglia del Galileo. Attorno al ritratto sia scritto Galileus Aet. Suae 68. In fondo in Castelletta sia un distico.*"

Galileo was sixty-eight in 1632. We know of no Italian portrait of him assignable to that year—nothing between Passignani's in 1624 and Sustermans' in 1635, to which latter the description copied from the Pitti Palace inventory in no way applies. As Viviani was not always accurate in his dates and facts, may we assume that 68 is a slip of the pen for 60? This would indicate the Passignani replica as that which he proposed to engrave, and, therefore, we may assume that it was then in his possession.

Viviani's collection, as we know (p. 17 *supra*), passed to his heirs in 1703, and came for the most part into the possession of Nelli in 1750-54. In 1762, Nelli had the Passignani replica engraved by Francesco Allegrini; and another engraving by Joseph Calendi was used as frontispiece to Vol. 2 of his "*Vita Di Galileo*," published in 1793. After Nelli's death at the close of that year, the picture disappeared again until about 1860, when it came into the hands of Conte Paolo Galletti, in a bad condition;

and from the renovated picture the photograph here reproduced was taken.¹

REPRODUCTIONS.

Reproductions will be found as follows: (1) "Serie Di Ritratti Di Uomini Illustri Toscani," Firenze, 1768, inscribed Giuseppe Zocchi del. Fran^o Allegrini inc. 1762. (2) Nelli: "Vita E Commercio Letterario Di Galileo," Losanna, 1793, inscribed Joseph Calendi sculpt. Raph. Morghen dirixit. (3) "Ricordi Delle Mss Di Galileo . . . Nella Biblioteca Nazionale Di Firenze," Firenze, 1909. This is a reproduction of Allegrini's engraving by Luigi Andreani.

X.

PORTRAIT

BY JOACHIM VON SANDRART, 1606-1688.

This artist was born in Frankfort in 1606, and at the age of twenty-one went to Italy. He first studied in Venice, and then went on to Rome, where he remained several years, painting chiefly for Cardinal Maffeo Barberini, afterwards Pope Urbano VIII. He returned to Germany in 1637, and died in Nuremberg, October 14th, 1688.

The portrait was painted, probably, during Galileo's last visit to Rome in the early part of 1633, and before the terrors of the Inquisition began to overwhelm him. Its present whereabouts is

¹Galletti had a small collection of Galileiana in the Torre del Gallo, overlooking Florence, and not far from Galileo's last home in Arcetri. In 1905, the property fell into the hands of vandals, and the old tower was transformed out of all recognition into a caravanserai of the Cafè-Restaurant order. Of the exhibits a few of the more important were bought by the Italian Government, and added to the Galileian Papers in the National Library, Florence. The rest was removed to Galletti's house in Florence, where he died in September, 1914.

not known, and we must be content with Kilian's engraving after it, which was published in "*Academia Nobilissima Artis Pictoriae*," Norimbergae, 1683. On plate 7, inscribed B. Kilian sculp., the portrait of Galileo comes second in a group of six. In 1633 Galileo was sixty-nine years old, but Kilian makes him look like a man of fifty, showing how unsafe it is to rely upon engravings in judging original paintings.

In a brief biography which accompanies the engraving Sandrart says:—"Magni igitur viri illius memoria me admonet, quam familiariter ac benigne hoc ipso, Romae, cum Inquisitionis negotio inibi vacaret, usus sim, in Palatio Mediceo; quod omnis antiquitatis verum armamentarium et rarissimarum rerum singulare theatrum tunc erat: hic enim opticae simul ac geometriae studiis summopere oblectatus, ab illustri doctore ac magistro ea didici, quae universus orbis splendide mecum ignorabat: Quid multa? per tubum in tubiculo suo ad Lunam haud difficulter directum, montes et valles et sylvas et regiones, et lucem et umbram, et omnia ad oculum ostendit. Hic mihi habitus ab Eo honor, ut imaginem Ipsius debitis vicissim honoribus colerem, stimulator et concitator fuit" (p. 389).

XI.

PORTRAIT

BY GIUSTO SUSTERMANS, 1597-1681.

FIRST PORTRAIT OF 1635.

Favaro has collected much interesting information on the history and vicissitudes of this celebrated picture, of which a *résumé* must here suffice. Among all the portraits of Galileo, the most precious, whether for the excellence of the artist, or for the

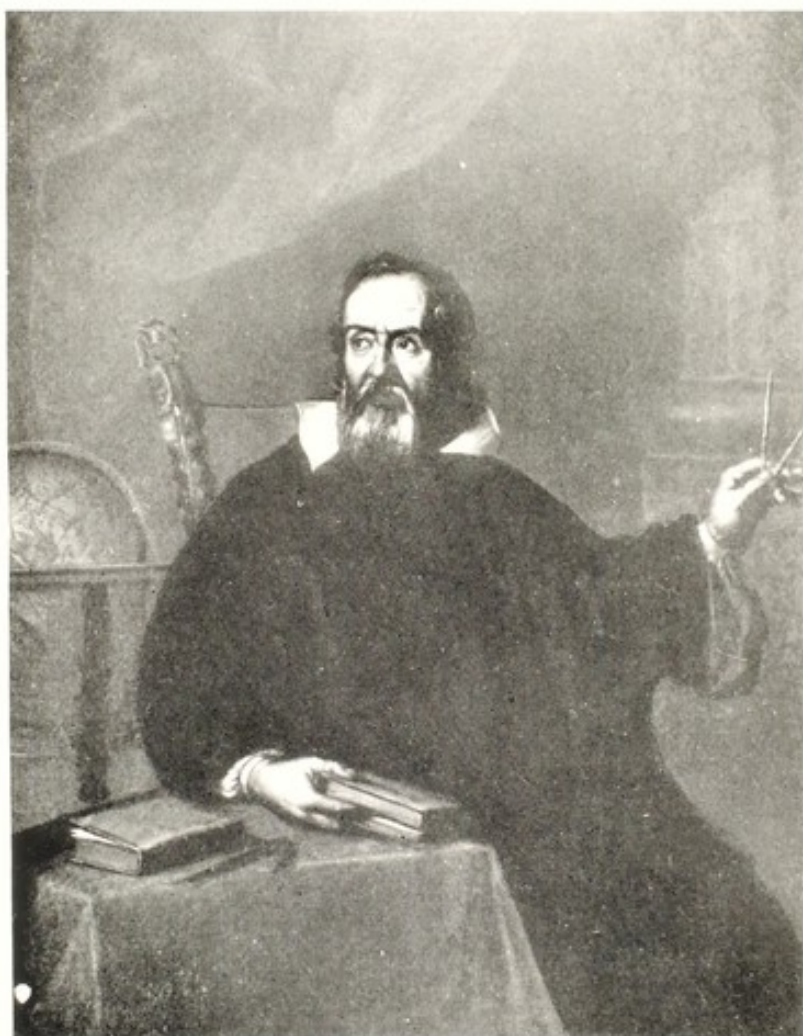


Sustermans' original of 1640 in the possession of
Miss V. F. Robinson, London.
(*See page 47*).



Portrait by Claude Mellan in the Vatican Library.
(*See page 51*).

PLATE XII.



Portrait by unknown artist in the Museo Galileiano,
Torre del Gallo, Florence.
(See page 52).

exquisiteness of his work, or for its resemblance (which all contemporaries have declared to be perfect), is that which we owe to Giusto Sustermans. This distinguished painter was born in Antwerp in 1597. He first studied under William de Vos in Antwerp, and then went to Paris to the studio of François Pourbus. After travelling slowly through Germany, he was summoned to Florence by the Grand Duke, Cosimo II, to make some tapestries for his private apartments; and, as the young man had already a reputation for portraiture, he was soon appointed Court Painter. In 1623-4, he was called to Vienna to paint the Imperial Couple, for which he was granted Letters-patent of nobility. In 1627, he was in Rome to paint Pope Urbano VIII, and members of the Barberini family, and then a number of Cardinals; for all of which he received large gifts and payments, and, finally, the coveted ribbon of the Order of Malta.

About 1620, Galileo became acquainted with Eliä Diodati (an Italian refugee then living in Paris), who in that year made a special visit to Italy, in company with Pierre Gassendi, the celebrated French philosopher and mathematician, to see the great man in Florence. In the course of the next twenty years he (Diodati) was able to help his new friend in many ways in the propagation abroad of his astronomical doctrines. With time the acquaintance grew into intimacy and a mutual affection. Whether asked for, or spontaneously offered, we do not know, but we gather from Diodati's letters that about 1633-4 Galileo had proposed to send him his portrait as a token of esteem and gratitude. Early in 1635, Sustermans was commissioned to do the work, and by September of that year it was finished. It was despatched in due course to Paris via Marseilles and Lyons, and reached safely the latter place in January, 1636. Here it was detained to admit of two copies being made, and, ultimately, it would reach its destination a month later. But of this we have

no documentary proof; indeed, we hear no more of the picture for over twenty years, owing to an unfortunate gap in Galileo's *carteggio*.

Then, in 1656, Viviani, in pursuance of his life-work, the collection of portraits, letters, and papers of, or relating to, Galileo, opened a correspondence with Diodati with the object of getting from him all Galileo's letters, and, if possible, the portrait which he was known to cherish. After some hesitation Diodati yielded on both points, and in his letter of June 24th, 1656, says: "As to the portrait with which Galileo honoured me, considering how much the Grand Duke esteemed him (as shown by his visits to Arcetri), and considering the picture to be a perfect work, as well for its exquisite art, as for the perfect likeness, I have resolved to present it to his Highness as a thing most worthy of being preserved, with the many other effigies of illustrious men, in his palace, where he can feast his eyes upon it every day. And, therefore, I shall despatch it with the least delay directed to your Excellency, who will do me the favour of presenting it in my name to his Highness."

For over five months Diodati had to wait for news of his very generous donation. At last, Viviani wrote him a long letter, dated December 4th, 1656, in which he feebly excused himself for the long silence, and acknowledged the receipt of the letters and portrait, as to which he entered into many particulars. After tedious delays in Custom Houses and Quarantine Stations, the packet arrived on November 20th, damaged, but contents in perfect order. The picture was presented at once to the Grand Duke, Ferdinando II; "who received it with manifestations of no ordinary pleasure. He made me read the letter which you addressed to himself, and frequently interrupted me with words of veneration for our old Master, and of esteem and thanks for yourself, about whom he asked many questions."¹

¹ "Atti del Reale Istituto Veneto," Vol. 72.

In fine, the portrait was entrusted to the special care of Prince Leopoldo de Medici, afterwards Cardinal; and, later on, he placed it in the Uffizi Gallery, Florence, "in order," as he said, "to show to all two marvels of nature, one in the personality of the subject, and the other in the marvellous art of the painter." It is now hung in Room XIX, Sala del Baroccio, No. 163, and is reproduced as frontispiece to this volume.¹

REPRODUCTIONS.

These are very numerous, and are to be found in all countries in both the painted and the engraved forms. I mention here those examples only which have come under the notice of Professor Favaro or of myself.

Copies in Oil.

(1) and (2). The first two copies in oil are those made in France to the order of Roberto Galilei (a cousin) on the occasion of the picture's arrival in Lyons *en route* for Paris (p. 33 *supra*). These were intended, one for himself and the other for M. Fabri de Peiresc, "than whom," wrote Roberto, "no man in the world has a greater reverence for Galileo."²

¹ Sustermans' house is pointed out in the little Piazza degli Uganelli (not far from Galileo's last home in Arcetri). It bears on a white mural slab an inscription in Italian, of which I give the English equivalent:—

HERE SUSTERMANS LIVED,
THE PAINTER FROM LIFE OF THE PORTRAIT OF
THE RENOWNED GALILEO.

² Nicolas Claude Fabri de Peiresc and Galileo were warm friends since the far-off days in Padua. Born in 1580 at Aix, in Provence, he showed as a boy extraordinary abilities. He studied in Padua, 1600-05, and there mastered Mathematics, Hebrew, Arabic, and other Eastern languages; but his great delight was the study of antiquities, prodigies of the air, and flying machines! He knew Selden, Camden, Barclay, and Harvey, in England, and Joseph Scaliger in Holland; and carried on an enormous correspondence with learned men of Europe, among them, of course, Galileo, in whose *carteggio* there are no fewer than thirty-seven of his letters. One of Galileo's to him was sold in London in 1911, and was bought by the late Frank Sabin, of New Bond Street, for 116 guineas! He died at Aix in 1637, lamented, it is said, in 40 languages.

Of these copies we know no more, but I venture to suggest that François Perrier was the copyist. As a young man he lived in poor circumstances in Lyons, and had so great a desire to visit Rome that he consented to act as attendant on a blind gentleman who was travelling thither. His chief employment in Rome was the humble but useful one of copying famous pictures for the dealers. Ultimately, he returned to France, and settled in Paris, where he became famous, and where he died in 1660. (3) The Royal Society, London, possesses a good copy, old and in excellent condition. The Secretary tells me it has no history beyond the donor's name, but I venture to ascribe it to François Perrier, as suggested above. If I am right, one of two missing pictures is accounted for. The canvas measures 24 in. by 19 in., and in the right-hand top corner is inscribed :

Galileus Galileo.¹

(4) Favaro has a note of a portrait (*in piccolò*) which Protasio Felice Salvetti presented to Viviani in September, 1685. He is doubtful whether it should be classed as a picture from life, which would make it valuable in our eyes, or as a copy of some existing work, ?Sustermans; he is inclined to connect it with a picture which he saw many years ago in the house of General Antonio Botto, then in charge of the Cartographic Department of the Istituto Geografico Militare di Firenze.² (5) A fine portrait hung in the Great Hall of the Dominican Convent, Santa Maria sopra Minerva, Rome, to commemorate the fact that there, on June 22nd, 1633, Galileo, "in penitential garb," was summoned to hear

¹ "The first scientific meetings in England, whence resulted the Royal Society in 1660, were mainly occupied with Galileo's discoveries, and might be called a Galilean Society." (Baden Powell, in "History of the Physical Sciences," p. 256).

² Favaro has a note of another old copy, "which we know to exist in the Villa Leonardi at Santa Brigida (Val di Sieve), but of which we have not been able to obtain any precise indications."



Portrait of Pope Paul V, in the Uffizi Gallery,
Florence.
(See page 62).



Portrait of Pope Urbano VIII, in the Uffizi
Gallery.
(See page 62).

PLATE XIV.



Inquisition Scene by Robert-Fleury in the Louvre, Paris.
(See page 66).

the sentence of the Inquisition, and to read his own recantation. The hall is now used by the Council of Public Instruction, and, by the irony of fate, the doctrines now discussed and issued therefrom are the same as those for which Galileo was there condemned, i.e. as Milton has it, "for thinking in astronomy otherwise than the Franciscan and Dominican licensers thought." (6) A modern copy in the Central Hall of the Astronomical Observatory, Arcetri. (7) In the Monastery at Montecatini, of which no particulars are procurable. (8) A portrait in the possession of Commendatore Gianfresco Gammurrini of Bagnoro, near Arezzo. No particulars obtainable. (9) In 1910, a London dealer "picked up" at a miscellaneous sale of pictures, etc., a portrait, 23½ in. by 19½ in., which he recognised as a modern copy of Sustermans', but which was described in the catalogue as "Portrait of a Gentleman, artist unknown." A little research enabled him to say that the work was done about 1825-30 by William Bradley, whose initials, W. B., appear on the back of the canvas. Bradley was born in Manchester in 1801, and was left an orphan when three years old. He began life as an errand-boy, and soon displayed a consuming taste for drawing. At the age of sixteen he set up as an artist, painting portraits at one shilling per head, and advertising himself as "Portrait, Miniature, and Animal Painter, and Teacher of Drawing." After some twenty-three years of work in London and in travelling in Italy, he returned to Manchester in 1847, where, as previously in London, he enjoyed a large share of patronage. In his later years his health broke down, and his mind became affected. He died in poor circumstances on July 4th, 1857.

His copy of Sustermans is a creditable performance, and if compared with the original will be found to be a faithful copy. I am glad to know that it has found (1918) a suitable home in the Institution of Electrical Engineers, London, where it should be

appreciated, if only because Galileo was one of our early Magneticians, and surpassed all others in the difficult art of shaping and arming the Loadstone. (10) Some years ago (1917), I saw in an art-dealer's shop in Museum Street, London, a miniature portrait in oils. It was a fairly good copy, and was bought a few weeks previously at a sale at Christie and Manson's in a lot with other items. Can this, also, be the work of William Bradley, who was known to excel in this art? (11) The same dealer as mentioned in No. 9 had another copy of Sustermans, 25in. by 21in., painted by N. Cocconi in 1872. The painter's name is new to me, but, as so often happens in these cases, further particulars are not procurable. (12) In the Museo Galileiano, Torre del Gallo, there was a small drawing in red pencil bearing the signature of Guido Reni, and catalogued as "*Ritratto di Galileo: disegno di Guido Reni.*" It has since been admitted to be a clever imitation of Guido's style by Egisto Rossi, a well-known Florentine sculptor in Count Galletti's day, and an able imitator of drawings of the Old Masters. The resemblance to Sustermans' portrait is striking enough. (13) Our last copy in oils is a remarkably faithful one, so much so that comparing photographs of it and of the original it is not possible to see any difference. It was a commission by the writer, and was done in 1901 by Miss Renée Baker (now Mrs. Robert Rankin) at the age of eighteen, and while studying at the Belle Arti in Florence. It is now in her home, Broughton Tower, Lancashire.¹

¹ In "*La Revue Moderne des Arts et de la Vie*," Paris, 15th June, 1926, there is a short appreciative notice of Mrs. Rankin's work, illustrated with six examples (Scenes at Sables d'Olonne, Vendée). In the Royal Academy Exhibition of this year (1929) she has a water-colour—*The Stark*—No. 812 in the catalogue. Her first teacher, Blanc-Garin, of Brussels, was prophetic in his judgment—"Peut-être, sera tard, mais elle arrivera—cette petite."

REPRODUCTIONS.

ENGRAVINGS IN PRINTS AND BOOKS.

(1) In the Hope Collection, Oxford, there is an engraving of what looks like a bust. On the base is inscribed:—

Galileus Galilei

Geb 1564. †1642 d. 8t. Jan.

The print itself is inscribed:—

Nach Piroti. Gestochen von G. C. Schmidt.

Apparently, the "bust" was first engraved in steel by Piroti for Paolo Frisi's "Elogio Del Galileo," Livorno, 1775, and afterwards was copied by Schmidt for "Geschichte des Lebens und der Schriften des Galileo" (C. G. Jagemann, Wiemar, 1783). (2) In Venturi's "Memorie E Lettere Inedite Di Galileo," Modena, 1818-21, there is a fine frontispiece, engraved by G. Rocca after Benvenuti. Pietro Benvenuti, who died in 1844, was considered the best painter in Italy at the beginning of the last century, and his copy of Sustermans, judging by Rocca's engraving, was justly popular. It has been copied on, at least, seven occasions. (3) By Galgano Cipriani,¹ *circa* 1830. A specimen in the Hope Collection bears the following inscription:—

Galganus Cipriani Del. Et Sculp. Flor.

Raph. Morghen Dirixit

Galileo Galilei

A Sua Eccellenza Il Sig^{re} Marchese

Federigo Manfredini, Generale E

Colonello, Proprietario, Ec, Ec, Ec.

D. e D.

Galgano Cipriani.

(4) In the same collection there is another but smaller copper-engraving in 4to. clearly after Benvenuti, and inscribed C. Büscher

¹ Born in Siena in 1775. He was professor in the Accademia di Belle Arti of Naples, and, later, in that of Venice.

sc, 1818. (5) In Drinkwater-Bethune's *Life of Galileo* in "Library of Useful Knowledge," London, 1829, there is a good lithographic frontispiece after Benvenuti. (6) The same has been reproduced by W. W. Bryant in his little book "Galileo," London, 1918, published by the Society for Promoting Christian Knowledge. (7) A large engraving inscribed:—

Nach. Justus Pustermann [sic] Singer sc.
Galileo Galilei

Stabilto. Artco. del Lloyd Austrco. in Trieste.

This is a pretentious composition, and utterly untrue to the work of Sustermans. I have seen frauds which bore more resemblance to their pretended originals than this—indeed, I am inclined to class it as a fraud pure and simple. It shows a man in the prime of life, thirty-five, instead of sixty-nine. The background consists of sea, high land, and the upper part of a tower, with open flag. Behind the standing figure is a large celestial globe. The left hand holds a roll of paper, on the turned corner of which are the words *E Pur [si muove]*. Altogether a whimsical study. (8) In Mathilde Raven's "Galileo: Romanzo Storico," Torino e Napoli, 1869 (Tradotto dal Tedesco da Gustavo Strafforello), the frontispiece is, clearly, copied from Benvenuti—good in a way but not a faithful copy. On the right arm one sees faintly a monogram thus \mathfrak{L} which might stand for Luigi Calamatta, a well-known engraver of Brussels in the first half of the last century. (9) Our seventh and last copy of Benvenuti is prefixed to Brewster's biography of Galileo in "Martyrs of Science," London, edition of 1874. The portrait is reversed, showing the characteristic wart on the right cheek instead of the left.

The other reproductions of Sustermans' 1635 portrait, of which we have notes, can be put in a table, as we have nothing of any interest concerning them.

Engravings in Prints and Books after Sustrmans' Portrait of 1635.

NO.	NATURE.	DESIGNER.	INCISOR.	YEAR.	REMARKS, WHERE PUBLISHED.
1	Engraving	...	Cl. Audran.	1641	In "Galilaei Galilaei . . . Systema Cosmicum." Lugduni.
2	Engraving	...	F. Cristofani	1658	As a large Print.
3	Engraving	...	F. Zucchi	1744	As Frontispiece to "Opere di Galileo," Padova.
4	Engraving	...	Todeschini	1800	No details.
5	Engraving	...	Giac. Zatta	1800	As a print. Copy in Biblioteca Marciana, Florence.
6	Engraving	No indication		...	An oval print, inscribed Il Divino Galileo. Copy in the Hope Collection, Oxford.
7	Engraving	...	Audibran	...	Published as a print by Furne, Paris.
8	Engraving	Martinet	Martinet	1836	In "Portraits et Histoire des Hommes Utiles," Paris.
9	Engraving	L. Travalloni	L. Travalloni	1836	Copy in the Hope Collection.
10	Engraving	...	F. Grassini	1838	A large print, inscribed Nello Studio Toschi.
11	Engraving	F. Spagnoli	F. Spagnoli	1840	In "Biografia dei Pisani Illustri," Pisa.
12	Lithograph	...	Angiolini	1844	In Florence. Spagnoli incised after Costoli the statue in Tribuna di Galileo, Florence.
13	Engraving	...	Cantagalli	1892	In "Vite e Ritratti di Illustri Italiani," Bologna.
14	Lithograph	No indication		1893	In "L'Illustrazione Italiana" (18th December, 1892), Milano. Galileo's Tercentenary in Padua.
15	Engraving	...	C. Piotti—Pirola	1893	Prefixed to Professor Zilova's "Discourse," Warsaw.
16	Engraving	Lodeo. Bigola	Lodeo. Bigola	1895	In "Natura ed Arte" (15th January, 1893), Milano. Galileo's Tercentenary in Padua.
17	Lithograph	...	A. Pinzon	...	Published as a print by Reale Calcografia Department, Roma.
18	Lithograph	...	H. Müller	...	No details.
19	Engraving	...	Demenez	...	Reported by V. Prouté, Editeur, Paris. No details.
20	Engraving	...	A. Bianchi	1898	Under direction of L. Calamatta.
21	Photo. Process	Alinari Florence		1892	Published as a print by Reale Calcografia Dept., Roma. Full size copy. In Royal Astronomical Society's Rooms, Burlington House. Presented by the late Sir William Huggins, F.R.S.
22	Photo. Pro.	...	...	1898	In Berry's "Short History of Astronomy," London.
23	Photo. Process.	...	...	1903	Frontispiece, Fabie's "Galileo: His Life and Work," London.
24	Photo. Process	...	...	1909	In Müller's "Galileo und das Kopernikanische Welt-system," Freiburg.

XII.

PORTRAIT SKETCH (*Bozza*)

BY SUSTERMANS, 1636.

Early in 1636, Sustermans appears to have painted another portrait of Galileo, which is described as a sketch or *bozza*. Of this Favaro has found a trace in Galileo's correspondence. It would seem that at the beginning of 1637 Michelangelo Buonarroti (the younger) asked for his portrait, and Galileo replied:—"I have no portrait of myself, except a *bozza* made a year ago by sig. Giusto, the Fleming, which is really nothing more than a rough draught. I am sorry I cannot oblige your Excellency." He appears to have kept this by him till his death, when it passed to his son, and thence, in 1649, to Sestilia, Vincenzio's widow, in the inventory of whose effects it is mentioned. Its present whereabouts is unknown, unless it be the *small* picture in Galletti's Museo Galileiano, which has been reproduced by Mrs. Fanny Byse in "Milton on the Continent," London, 1903.

Apparently, there is another and a larger *bozza* in existence, which has found its way to America. I learn as much from a letter of a New York correspondent. Writing on February 7th, 1914, he tells me that the painting, 18in. by 22in., came into his possession through a Swedish artist living in Brooklyn; that that gentleman bought it in Holland, in 1889, at an auction sale held by Sustermans, a descendant of the painter; and that it had been preserved in the family as a souvenir of their distinguished relative.

Unfortunately, I was unable to procure a photograph of it, but, soon after, Professor Favaro was favoured with one, of which he says:—"That New York gentleman has sent me a poor photograph of a portrait of Galileo, which he claims to be a *bozzetto* of the Uffizi picture. There is, certainly, an air of resemblance, but

of its worth I cannot judge from the photograph. It seems to be an old, ugly, and cracked work, showing clear signs of restoration. He priced it at 1500 dollars, saying it was worth three or four times more! I wonder that one living in the country of millionaires should try a deal with a poor devil of a student—and an Italian into the bargain. My Galileian studies have brought me little in the way of worldly goods in comparison with the expenses I have incurred; but in any case, I am not in the running with millionaires.”

XIII.

PORTRAIT

BY SUSTERMANS, 1640.

In 1640, when this portrait was painted, Galileo was seventy-six years old, and had been totally blind since December, 1637. The Grand Duke, Ferdinando II, wishing to have a memento of his old tutor in his last years, the years in which he revered and loved him most,¹ commissioned Sustermans to do the work.

This portrait was kept jealously in the Grand Duke's private cabinet, where he delighted in comparing it with Sustermans' first portrait of 1635—the differences of style and treatment, the change of features,² the one (1635) vivacious, full of colour, illuminated as if in deep contemplation; in this other one (1640) the eyes are dim, the features emaciated, the expression still contemplative but severe as shown by the drawn eyebrows. The

¹ At this time he and members of his family paid many visits to Arcetri. On one occasion he stayed two hours and helped to prepare the sick man's medicine, saying, "I do it because I have only one Galileo."

² Due to blindness and five years of nearly constant ill-health, to say nothing of the irritating *surveillance* of the Inquisition agents.

treatment, he would observe, is most diverse—the first is finished with softness and with exquisite feeling; the second is in a manner more resolute—bold strokes in blends impossible to imitate, which seem coarse at close quarters, but which, viewed at the proper distance, are truly admirable in their effects.

It soon became evident that the Grand Duke must share his delights with others who were inclined to invade his sanctuary; and so to guard his privacy he ordered a copy to be made and hung in a place accessible to the public, namely, his Gallery of Portraits of Illustrious Men. This copy, as we may suppose, is now in the Pitti Gallery, Sala di Marte, No. 106, where, strangely enough, it is catalogued as *Scuola del Sustermans*.¹ Soon after (1641) Viviani had a copy made expressly for himself. These two copies are supposed to be the work of Sustermans, but owing to the vagueness of our references, we cannot be certain of this—indeed, as just remarked, the Pitti copy is catalogued as *Scuola del Sustermans*. However this may be, we have clear record of three identical pictures. Where are they? Of the two copies one is in the Pitti Gallery, the other (Viviani's) is in the Bodleian Library, Oxford, and the third and original I have traced to a lady in London!

Before dealing with the two pictures now in England, I must make brief mention of two important reproductions in oil of the Pitti portrait. (1) By Francesco Boschi (1619-1675). Boschi was a nephew and pupil of Matteo Rosselli, and excelled in portrait painting, as did his master, who was himself a pupil of Pontorno and Passignani. The picture is now in the Versailles Gallery, and

¹ It has been reproduced as frontispiece in "Dialogues concerning two new Sciences by Galileo," translated into English by Henry Crew and Alfonso de Salvio, New York, 1914. Also, in Gunther's *Kleine Rassenkunde Europas*, mit 20 Karten und 353 Ubbildungen, München, 1925, p. 168, where it is inscribed Galilei (hochgewachsen, bell-hautig, rotlich-blond, blauäugig, Vorwiegend Nordisch) (see p. 1 supra).



Inquisition Scene by Cabasson. From an engraving.
(See page 68).

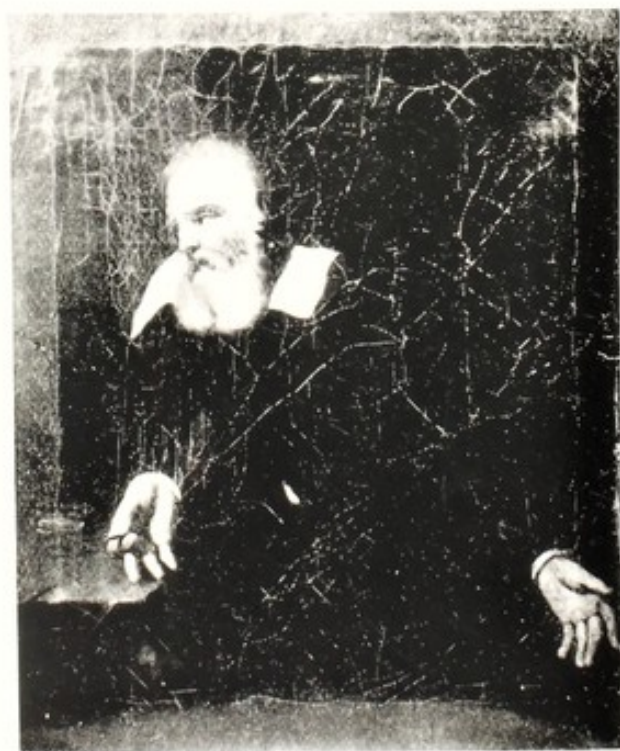


Inquisition Scene by Niccolò Barabino. Fresco in the Palazzo Celesia, Genoa.
Photograph by A. Fuzetti, Milan.
(See page 71).



Copy of last in *Tarsiatura* (inlaid wood-work) by Vincenzo Garassino, Savona, Liguria.

(See page 71).



Prison Scene by Murillo in possession of Jules van Belle, Roulers, Belgium.

(See page 74).

an engraving after it is published in Gavard's "*Galerics Historiques de Versailles*," Paris, *circa* 1840 (Serie X, Section 4). It is inscribed *Gravé par Jean Baptiste Vendersypen, élève de Calamatta, Bruxelles. Peint par Fr. Broschi [sic]. Diagraphie et Pantographe Gavard.* As Luigi Calamatta was Professor of Painting in Brussels in 1837, we may put the date of Vendersypen's work at 1835-40. (2) By Allan Ramsay in 1750, "from a picture by Giusto in the Pitti Gallery." It is now in the Master's Lodge, Trinity College, Cambridge—a donation in 1759 by Dr. Robert Smith, then Master of Trinity.

The Ramsay portrait has been reproduced as follows:—(1) An engraving by Robert Hart in (a) Knight's "*Gallery of Portraits*," London, 1834, (b) Orr's "*Portrait Gallery of Distinguished Poets, etc.*," 1853, (c) Mackenzie's "*Imperial Dictionary of Universal Biography*," 1865. Other reproductions of Hart's engraving will be found in (2) Miss Mary Allen-Olney, "*Private Life of Galileo*," London, 1870; (3) Harper's "*New Monthly Magazine*," New York, 1874; (4) Lodge, "*Pioneers of Science*," London, 1893; (5) a lithograph, inscribed C. Brandt del. Knesele sc.

THE BODLEIAN PORTRAIT.

I first saw this picture in 1913, and on inquiring as to its history, Mr. Madan, the late Librarian, told me that they had no record of it in the University Registers, beyond one entry in the *Registrum Benefactorum* of the Library as follows:—

"Clarissimus et doctissimus vir Signor Vincentio Viviani Magnae [sic] Hetruriae Ducis Mathematicus Academiae huic opus suum DE MAXIMIS ET MINIMIS GEOMETRICAM SC. DIVINATIONEM IN QUINTUM CONICORUM APOLLONII PERGAEI DESIDERATUM, Unacum picturà Galilaei a Galilaeis, ex Italia benignè transmisit. April XXVI. MDCLXI."

Mrs. R. L. Poole refers to the picture in her "Catalogue of Portraits in the Possession of the University, Colleges, City, and County, of Oxford" (Vol. I, p. 41) as follows:—

"Galileo

"Half length, slightly to L; face deeply lined; grey hair, moustache, and beard; square white collar, white cuffs, dark dress; his R hand grasps end of telescope; inscribed to L Galilaeo Galilaei; Canvas 30 in. by 25 in. (210).

"A version of the portrait of which another was engraved by Pietro Bottellini [sic], marked Passignano dipinse. Il quadro originale esiste nella Galleria di S. A. Principe Poniatowski.¹

"This portrait was sent expressly from Italy and given to the University in April 1661 by Vincenzo Viviani, who at the age of eighteen, in 1639, came to live with Galileo, and remained with him till the end, 'the last disciple and biographer of the master.' He erected the first public monument to him in 1693, and left by will money and directions for raising the tomb in Santa Croce, Florence. Viviani d. 1703."

REPRODUCTIONS.

(1) In the British Museum (Print Room) there is a small oval print, $3\frac{3}{4}$ in. by 3 in.; it shows Galileo wearing a cloak edged with fur and slashed about the sleeves after the fashion of an LLD.'s gown. It is inscribed "J. Baker: From the Picture in the Public Library, Oxford." Truly, the tag is necessary, so little resemblance is there to the Bodleian portrait. (2) In Mrs. Poole's "Catalogue" above quoted. (3) In Wells' "Outline of History," 1920, Part 17. (4) In Singer's "History and Method of Science," Oxford, 1921, Vol. II, p. 206 (Paper by J. J. Fahie).

¹ This is a mistake. Passignano died in 1638, and could not have painted a version of Sustermans' work of 1640, of which the Bodleian picture is a replica. The portrait engraved by Bettelini and marked "Passignano dipinse," is a totally different picture (see p. 24 supra).

THE ROBINSON PORTRAIT.

We now come to the third of the Sustermans group of portraits of 1640—41. My first indication of its existence in England was derived from "Notes and Queries" of April 11th, 1857, where "Dunelmensis" writes:—"In the Bodleian Gallery there is a portrait of Galileo, the painter of which is unknown to Dr. Bandinel, to whom I have applied. A similar portrait (except that the background is much darker) has been in the possession of my family for more than a century. Perhaps some of your correspondents could afford me a clue towards discovering the artist. The picture is one of considerable merit; and is evidently antique." Starting in 1914 from this fifty-seven-years-old clue, my inquiries led, ultimately, to the happiest results.

Dunelmensis, a *nom de plume* of frequent occurrence in "Notes and Queries" of the period, turns out to be the Rev. Charles Robinson. In 1914, I traced the picture to his widow, then living off Earl's Court Square, London. She kindly allowed me to see it and have it photographed. The picture was "picked up" by Mr. John Helyar Roche, Mr. Robinson's grandfather, in the Westminster Bridge Road, tied in a roll and very dirty, having been in the shopkeeper's hands for a number of years.

Mr. Lionel Robinson (brother of Charles) has given me his impressions of the picture, which he remembers distinctly:—"It is difficult," he says, "to say off-hand whether it differs more from the picture in the Pitti Gallery than from that in the Bodleian Library, as there are divergencies from both. At one time I thought it might be a copy by some travelling art-student, who, then as now, had to bring back evidence that he had been at work during his *wander-jähre*. This idea, however, would be difficult to sustain in view of the apparent age of the canvas, and I am rather converted to the idea that it may be almost, if not

actually, contemporary with Sustermans. He may have had pupils whose work he directed and even touched up."

Comparing these three pictures, we find a few points of detail which (hardly) call for remark. (a) The sizes of canvas are: Pitti portrait approximately $22\frac{1}{2}$ in. by $19\frac{1}{2}$ in., Bodleian portrait approximately 30 in. by 25 in., Robinson portrait approximately 31 in. by 26 in. (b) The Pitti portrait bears no inscription; the Bodleian has on the right side *Galilaeo Galilaei*. The Robinson has *Galileo* in left top corner. (c) In the Pitti, the top of the telescope is on the medial line of the figure. In the Bodleian and Robinson it is well away from this line. (d) The right hand is not shown in the Pitti, but appears in the other two, and to exactly the same extent. It has been suggested that the Pitti canvas has been cut down, thus hiding part of the hand. Certainly, a display of more canvas might reveal more of the hand, and so make the picture more like in size and detail its two fellows in England. Thus, the Bodleian and Robinson agree in those particulars in which they differ from the Pitti, pointing to the conclusion at which I have arrived, namely, that the Pitti is the copy which the Grand Duke ordered for public exhibition; that the Bodleian is the one which Viviani ordered expressly for himself; that the Robinson is the original one jealously kept in the Grand Duke's private cabinet; that the two last-named are the work of Sustermans; and that the first-named is, probably, the work of a pupil, "*Scuola del Sustermans*," as the catalogues have it.

Having finished our account of the Sustermans group of (1640) portraits, we may return for a moment to the question of their supposed connection with the two pictures, which we have described in Section VIII. as the work of Passignani. We have seen that these latter had lost their identity—a fate which has befallen other and more famous works—and had come to be

known as variants of the Pitti portrait. Apart altogether from the technical aspect, which we leave to the experts, a moment's comparison of the two groups should show how untenable is this view.

In the Passignani pictures Galileo is seated, may I say like a King on his throne, his sceptre (the telescope) well forward in the right hand—the source of his greatness; the left hand with fingers outspread so as to show the large signet ring, worn by members of the Lyncean Academy of Rome—the blue ribbon of science of those days. These emblems are so prominent as to hit the eye, and, I believe, they were meant to do so, to show the man as he was in his triumphal days, 1624, the friend of popes, and the cynosure of all eyes. In the Sustermans group we see nothing of these ostentatious trappings. The features, too, have changed, and why? because the circumstances have changed. The year now is 1640, when Galileo had been blind for two years; a broken “prisoner” of the Inquisition for eight years; and now painfully approaching his end. The motive here was not glorification, but a true picture of the man as the Grand Duke then saw him, and as he wished to have him in memory — a portrait pure and simple, without accessories, which in the circumstances would be out of place—not to say offensive. Considered in this way, I cannot bring myself to believe that all these canvases belong to the same time and are by the same artist.

Briefly, the case stands thus. The Lansdowne and Galletti portraits are claimed as the genuine work of Sustermans (and as variants of his Pitti picture). Those who hold this view admit, on the strength of Bettellini's engraving, that Passignani did paint a similar picture some sixteen years previously. That picture, they say, is lost, but they accept the engraving after it as a faithful copy. We are, then, forced to one of two conclusions—either (1) that, as some suggest, Sustermans copied Passignani without acknowledg-

ment, and is chargeable with plagiarism, which is absurd in the case of so resourceful a master, or (2) that it is an extraordinary coincidence of two somewhat similar pictures by different artists, both of the Reformed Florentine School, and both working in Florence, one from the subject in 1624, fourteen years before he became blind, and the other in 1640, two years after blindness. My contention is simple and relieves us from an embarrassing dilemma. I regard the case as one neither of plagiarism nor of coincidence, but simply one of wrong attribution. The so-called Sustermans variants are the original and replica painted by Passignani in 1624.

XIV.

LAST PORTRAITS FROM LIFE

BY CLAUDE MELLAN AND NICCOLÒ DELLA FIORA.

Professor Favaro has a note ("Atti Del Reale Istituto Veneto," Vol. 72) of two portraits which are, probably, the last of those done from life. He quotes a letter from Castelli in Rome to Galileo, introducing Niccolò della Fiora and Carlo Mellino (Claude Mellan) "who are going to Florence principally to have the honour of painting your portrait." Replying, on December 18th, 1639, Galileo says:—"I received this morning your gracious letter by the hands of the painters whom you recommended to me. I entertained the bearers as well as my miserable state of health would permit. I offered to put them up in my house, and did all I could to make their stay agreeable. And to you I return thanks for putting me in contact with men of such great fame."

We do not know for certain if these artists painted Galileo; but assuming they did (having travelled so far for that purpose),

Favaro is inclined to think that one of them, let us say Claude Mellan, is the author of the portrait which was at one time in the Library of the Barberini palace in Rome, and is now preserved in the Vatican Library. It has been reproduced by Sante Pieralisi in "*Urbano VIII E Galileo*," Roma, 1875, and, recently, by Favaro in his little book "*Galileo Galilei*," *Profili*, No. 10, edited by A. F. Formiggini, Modena, 1910.

To the other artist, della Fiora, Favaro attributes the portrait once in the Museum of Cavaliere Cassiano dal Pozzo, who was known to have collected the portraits of many great men, under each of which a suitable epigram by Gabriel Naudet was placed. That under Galileo ran:—

Non Vultum, Galilae, Tuum Mihi Cura Videndi Est.

Ast Oculata Magis Picta Tabella Placet:

Namque Oculis Reserata Tuis Qui Sidera Vidi,

Et Coelo per Te Reddita Iura Novo;

Nunc Oculos Coeca Dudum Sub Nocte Latentes,

Aequa Non Possem Cernere Mente Tuos!

XV.

DOUBTFUL PORTRAITS (5) OF UNKNOWN ORIGIN.

1. Favaro has a note of a doubtful case as follows: "Fra i ritratti di Galileo, dipinti per quanto sembra lui viventi, ma d'ignoto autore, ricorderemo la tela nell' Aula del Consiglio Academico dell' Università di Pisa, e che appartenne alla collezione dei ritratti degli illustri insegnanti nell' Ateneo Pisano che decorava la Sala delle lauree nell' Arcivescovado, collezione eseguita per ordine dell' Arcivescovo Angelo Franceschi, pisano, sul cadere del secolo decimottavo" ("*Atti Del Reale Istituto Veneto*," Vol. 73).

2. I am inclined to regard this as a genuine portrait of Galileo while living. The painter's name is not known, but it is, clearly, of considerable age. The picture used to be in the Collection of the late Conte Paolo Galletti, Torre del Gallo, outside Florence. It shows Galileo, as we suppose, in his study in Arcetri. He is seated by a table, on which his right hand rests, holding a book. The left hand is outstretched and holds up an open compass or divider. A large celestial globe is seen behind the right arm.

3 and 4. Favaro has a note of two other early pictures of unknown origin. He says:—"Two other portraits of Galileo, painted, probably in the 17th century, or at the beginning of the 18th, should be noted here, both forming part of the before-mentioned collection of Conte Paolo Galletti. One is a large canvas which originally belonged to the Tosi-Galilei family. The other is a more recent acquisition, and of much smaller proportions. It shows our philosopher seated at a table in an attitude of deep contemplation. An open volume and various mathematical instruments are lying before him, and by his side are an armillary sphere and a large celestial globe" ("Atti Del Reale Istituto Veneto," Vol. 72).

5. We may here dispose of still another doubtful portrait which is variously attributed to Velasquez and to Ribera (Il Spagnoletto). The dictionary "Nouveau Larousse" (*verbo* Galilée) says:—"Le Musée de Bésançon possède un tableau attribué à Velasquez, et représentant Galilée, la main appuyée sur un globe." On inquiry at the Museum, we were informed that the picture "est une copie d'après Ribera, représentant un astronome qui, paraît-il, est Galilée." The original painting is believed to be in the Palazzo Balbi, Genoa; indeed, according to old Guide Books, there are two canvasses and both are attributed to Ribera, one, No. 70, is labelled *Ritratto di un Filosofo*, and the other, No. 72, *Ritratto di un Matematico*. Unfortunately, the Palazzo Balbi is closed

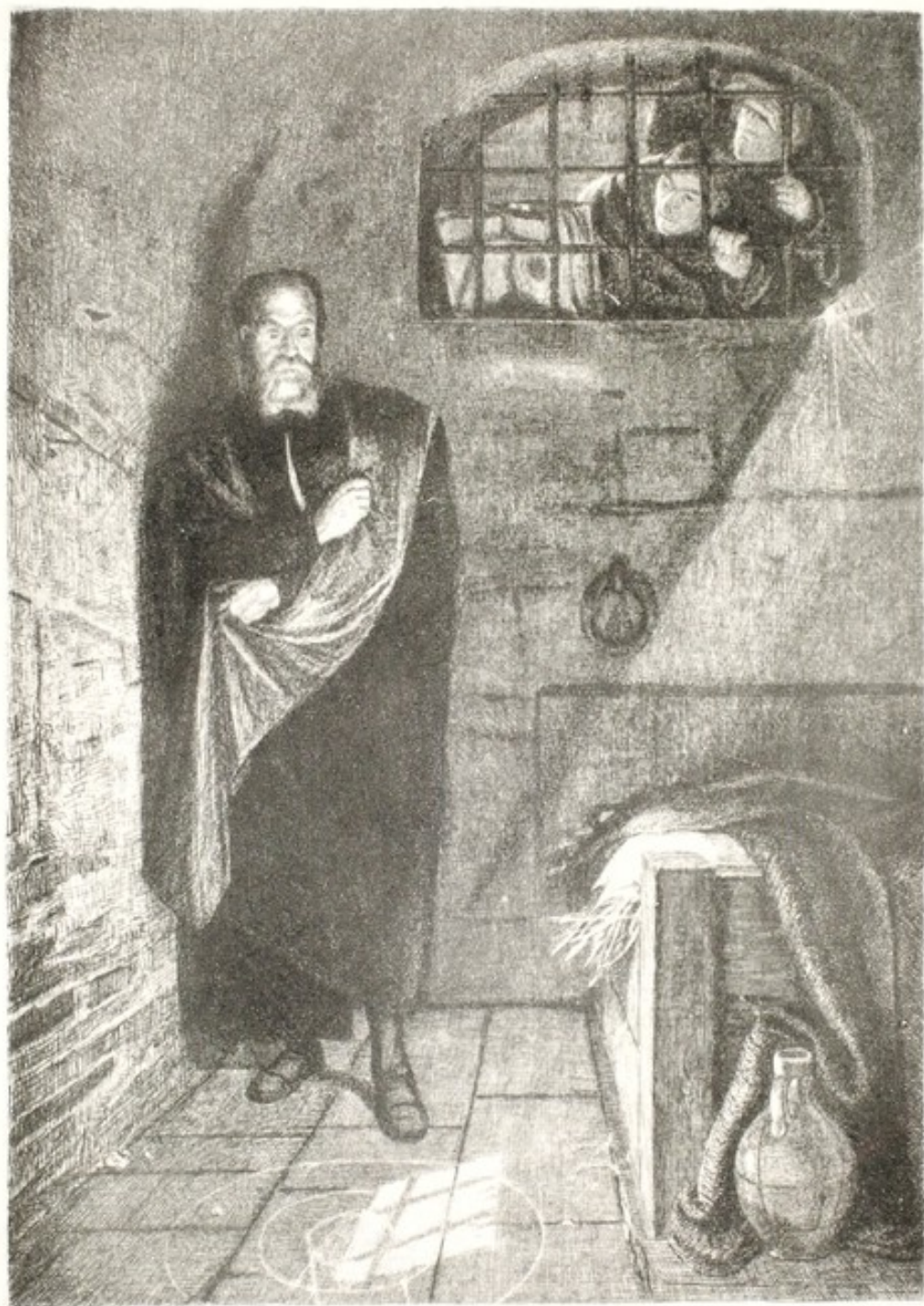


Prison Scene by J. A. Laurent.
From an engraving by Reveil.
(See page 77).



Prison Scene by S. A. Hart. From W. J. Linton's
wood-engraving in the British Museum (Print Room).
(See page 78).

PLATE XVIII.



Prison Scene by Carl von Piloty. From an engraving by F. L. Meyer.
(See page 81).

to the public, and we have not been able to obtain any information from the present occupier.¹

XVI.

ENGRAVED PORTRAITS OF GALILEO

IN THE PRINT ROOM, BRITISH MUSEUM. (Communicated).

- (1) by Ottavio Leoni, (a) Anderdon Collection, 39, 58.
(b) with Italian Portraits, 1856, 9, 13, 281.
- (2) Oval (12 by 10 cm.). J. Mulder fecit.
- (3) Small medallion. Villamoena del. G. P. Benoit sculp.
- (4) Outline engraving of his tomb, by Giulio, Giov. Bat., e Vincenzo Foggini (18 by 11 cm.).
- (5) Oval (10 by 8 cm.), engraved by J. Baker, "from a picture in the Public Library in Oxford."
- (6) Photo of drawing inscribed "296 maggio 1624 Galileo Galilei, Fiorentino"; three-quarter face right.
- (7) Small vignette by Audibran.
- (8) Oval (11 by 10 cm.). Tintoretto dip. N. Schiavoni inc.
- (9) Oval (12 by 10 cm.) in ornamental border. Cl. Audran fecit.

¹ It would seem that philosophers and mathematicians were favourite subjects for Ribera's brush. In Genoa, alone, there are six such pictures by him. Besides the two mentioned above, there is one in the Palazzo Rosso, called A Philosopher, and three in the Palazzo Durazzo—all of them Philosophers! One is supposed to be Heraclitus (the weeping philosopher), and another Democritus (the laughing philosopher). In the Louvre Catalogue there are four philosophers by the same artist, and in our Appendix (p. 172 *infra*) we shall have something to say of yet another!

- (10) 13 by 10 cm. Engraved by Hart from a picture in Trinity College, Cambridge.
- (11) (36 by 30 cm.). Passignani dip. Pietro Bettellini incise. 'Il quadro originale esiste nella Galleria di S. A. il Principe Poniatowski.

In "Collectanea Biographica" (B.M. Print Room), Vol. 39, gab.-gar., I found copies of the following engravings:—

- (1) Portrait of Galileo. Leoni's engraving of 1624.
- (2) Portrait of Galileo, signed J. Mülder, Fecit, after Sustermans' 1635 picture.
- (3) Portrait of Galileo, signed G. P. Benoist, after Villamoena.
- (4) Title-page, Dialogo of 1632, signed Steffan della Bella, F.
- (5) Title-page, Dialogo of 1632, Lugd. Bat. edition, MDCC, engraved after Steffan della Bella by J. Mülder.¹

XVII.

CATALOGUE DE LA COLLECTION DES PORTRAITS FRANCAIS ET
ETRANGERS CONSERVÉE AU DÉPARTEMENT DES ESTAMPES DE LA
BIBLIOTHÈQUE NATIONALE, PARIS, 1899.

PORTRAITS DE GALILÉE.

1. En buste, de $\frac{3}{4}$ à gauche, dans une bordure ovale. Grav. au burin anonyme, 2 états.
2. En buste, de $\frac{3}{4}$ à gauche. Grav. au burin anonyme.
3. En buste, de $\frac{3}{4}$ à droite, dans une bordure ovale. Grav. au burin anonyme.

¹ The student interested in engravings generally should not fail to visit the Hope Collection of Engraved Portraits, Oxford. I found it rich in Galileian specimens, and I take this opportunity to express my great obligations to a very sympathetic Curator.

4. En buste, de $\frac{3}{4}$ à gauche. Grav. par Fr. Allegrini, 1762, d'après Giusto Subtermans.
5. En buste, de $\frac{3}{4}$ à gauche. Lith. Artus (1837).
6. En buste, de $\frac{3}{4}$ à gauche. Grav. par Audibran.
7. En buste, de $\frac{3}{4}$ à droite, dans une bordure ovale. Grav. par Cl. Audran.
8. En buste, de $\frac{3}{4}$ à droite, dans un médaillon rond. Grav. par G. P. Benoist, d'après Villamena. 2 états.
9. A mi-corps, assis, de $\frac{3}{4}$ à gauche. Grav. par Pietro Bettellini, d'après Passignani.
10. En buste, de $\frac{3}{4}$ à droite. Lith. par Cecilie Brandt, d'après Ramsay.
11. En buste, de $\frac{3}{4}$ à gauche, dans un octagone. Grav. par C. Buscher, 1818, d'après J. Subtermans.
12. En buste, de $\frac{3}{4}$ à droite, dans un ovale. Grav. par P. Caronni.
13. En buste, de $\frac{3}{4}$ à gauche, dans une bordure ovale. Publ. par Desrochers. 2 états.
14. En pied, assis, de face, sur un socle. Grav. par V. Encisi, 1856.
15. En buste, de $\frac{3}{4}$ à droite, dans une bordure ovale. Lith. par Farcy.
16. En buste, de $\frac{3}{4}$ à gauche. Grav. par F. de Fournier, d'après un élève de Sustermans.
17. En buste, de $\frac{3}{4}$ à gauche. Grav. par J. C. François. 2 états.
18. En buste, de $\frac{3}{4}$ à gauche, dans une bordure ovale. Imp. Giorgi.
19. En buste, de $\frac{3}{4}$ à gauche. Grav. par Rob. Hart. d'après Ramsay.

20. En buste, de $\frac{3}{4}$ à gauche, dans une bordure ronde. Grav. en bois, d'après H. Heidel.
21. En buste, de $\frac{3}{4}$ à droite, dans une bordure ovale. Grav. par Jac. ab Heyden.
22. En buste, de $\frac{3}{4}$ à droite. Lith. Kaepelin (1851).
23. En buste, de profil à gauche, dans une bordure ronde. Grav. par B. Kilian, pour Sandrart, Academia.
24. En buste, de $\frac{3}{4}$ à droite. Grav. au trait sous la direction de Landon, d'après le Padouan, fils.
25. En pied, de profil à droite, sur un modèle de pendule. Lith. Langlumé.
26. En buste, de $\frac{3}{4}$ à droite, dans une bordure ovale. Grav. par N. de Larmessin.
27. En pied, de profil à gauche. Lith. par J. A. L. (Jean-André Laurent) (1822).
28. En buste, de $\frac{3}{4}$ à droite, dans une bordure ovale. Grav. par Ottavio Leoni, 1624.
29. En buste, de $\frac{3}{4}$ à gauche. Grav. par Martinet.
30. En buste, de $\frac{3}{4}$ à droite. Lith. par H. Müller, d'après Subtermans.
31. En buste, de $\frac{3}{4}$ à gauche, sur un socle. Grav. par G. C. Schmidt, d'après Piroli.
32. En buste, de $\frac{3}{4}$ à gauche, Publié par Vallet.
33. En buste, de $\frac{3}{4}$ à gauche, dans une bordure ovale. Grav. par F. Villamena, 3 états.
34. En buste, de profil à gauche, dans une bordure ovale. Grav. par Giacomo Zatta.
35. En buste, de $\frac{3}{4}$ à droite, dans une bordure ovale. Grav. par F. Zucchi.

XVIII.

LIBRARY OF CONGRESS.

AMERICAN LIBRARY ASSOCIATION.

Index to portraits contained in printed books and periodicals, compiled with the co-operation of many librarians and others for the Publishing Board of the American Library Association. Edited by William Coolidge Lane, Librarian of Harvard University, and Nina E. Browne, Secretary A.L.A. Publishing Board, Washington, 1906.

Galilei, Galileo, 1564-1642.


1. "Allgemeine Weltgeschichte," Berlin, 1884-92, Vol. VIII, p. 301. Justus Sustermans pint. (Uffizi).
2. Bardi, Luigi, "Galerie du Palais Pitti," Florence, 1842-3, Vol. I, tav. 101. Sustermans p. F. de Fournier inc.
3. Berry, Arthur, "Short History of Astronomy," New York, 1899, p. 171.
4. Bolton, Sara Knowles, "Famous Men of Science," New York, 1889, p. 1.
5. Bullart, Isaac, "Académie des Sciences et des Arts," Bruxelles, 1695, Vol. II, p. 131. N. de Larmessin inc.
6. "Eclectic Magazine," New York and Philadelphia, Vol. XXVI, 1852, p. 145. H. Wyatt. S. Sartain inc.
7. Idem. Vol. XXX, 1853, p. 1. Sartain inc. (Galileo in prigione).
8. Idem. Vol. XLI, 1860, p. 289. H. Wyatt f. S. Sartain inc.
9. Harper's "New Monthly Magazine," New York, Vol. XLIX, p. 703, 1874.

10. "Iconografia di Uomini Sommi Nelle Scienze E Nelle Arti Italiane," Napoli, 1854, tav. 36, Sustermans p. Cat. Piotti. Piroli inc.
11. "Imperial Dictionary of Universal Biography," London, Vol. II, p. 536-9. Ramsay p. Robert Hart inc.
12. Knight, Charles, "Gallery of Portraits," London, 1834, Vol. III, p. 113. Ramsay p. Robert Hart inc.
13. "Penny Magazine," Knight's, London, 1833, Vol. II, p. 64.
14. "Portfolio," London, 1878, Vol. IX, p. 72. Carlo Piloty p. F. L. Meyer inc.
15. "Portrait Gallery of Distinguished Poets, etc.," Orr, London, 1853, Vol. I, p. 241. Ramsay p. Robert Hart inc.
16. Seidlitz, Woldemars von, "Allgemeines Historisches Porträtwerk," München, 1894, Vol. II, Tav. 23. Sustermans p.
17. Société Montyon et Franklin, "Portraits et Histoires des Hommes Utiles," Paris, 1833-41, Vol. II, Tav. 32. Martinet del. et inc.
18. Spofford, A. R., "Library of Historic Characters," Philadelphia, 1896, Vol. X, p. 23.
19. "Versailles Galeries Historiques, etc.," Ch. Gavard, 1838, Vol. X, Tav. 2161. Francesco Boschi p. Vendersypen inc. (Scuola di L. Calamatta).

To the above list may be added a few other items for which there is no place in the text:—

1. Wilkins, John, "Discourse Concerning a New World and Another Planet," London, 1708. Engraved title-page with portraits of Copernicus, Galileo (telescope in hand),

and Kepler, all pointing to the solar system, and each bearing a tag. On the first is *Quid si fic*, on the second *Hic ejus oculi*, and on the third *Utinam et alae*.

2. "Lives of the Most Eminent Literary and Scientific Men of Italy, Spain, and Portugal," Lardner's Cyclopaedia, London, 1835. Vignette on title-page inscribed H. Corbould del. E. Finden sc.
3. Mitchell, "The Orbs of Heaven," London, 1860. Frontispiece portrait, but untrue to reality in every way. A tall commanding figure, long wavy beard, long flowing mantle, and very wide sleeves. He stands before a large open volume in which, pen in hand, he is entering observations made through a large telescope, with all *modern* adjustments! The inscription is not clear. I read it  ? Luigi Calamatta.
4. Oggioni, "Galileo: Racconto Storico," Milano, 1873. On the cover of the book is stamped Galileo standing, and contemplating an astronomical figure traced on a wall; and in the frontispiece he seems to be uttering those words, *E pur si muove*, so horrifying to a cardinal and a Dominican monk, who are seen descending the stairs.
5. Brewster, "The Martyrs of Science," London, Chatto and Windus, 1874. On the cover is stamped in gold Galileo as a man of 30-35, with thick hair and beard, and folded arms, observing intently a swinging lamp in the Cathedral of Pisa. At the time of this scene, 1582, he was a student of eighteen, not a bearded man of thirty-five.

PART II.

SUBJECT PICTURES.

I.

GALILEO AND THE INQUISITION, 1616 AND 1632-3.

After portraits from life and their derivatives come a large number of what I shall call Subject Pictures, or studies of the composite order, in which Galileo, in victory or defeat, is the *motif*.

I begin with paintings commemorative of his encounters with the Inquisition, two Popes, Paul V and Urbano VIII, aiding and abetting in the background—a sad episode in the conflict between religion and science. To appreciate these pictures one must know something of the causes which led up to these Homeric contests, and for this the student should consult the voluminous records in the Vatican Library, or the ample excerpts brought together in Favaro's monographs, such as "Il Processo Del Galileo," 1902, and "Galileo E L'Inquisizione," 1907. The English reader will find a comprehensive statement in Von Gebler's "Galileo and the Roman Curia," London, 1879, and a condensed account in my "Galileo: His Life and Work," London, 1903. Here I must limit myself to a brief outline.

In August, 1609, Galileo invented the telescope, and in the following March he published "Sidereus Nuncius," Venetiis, 1610, giving a full account of his observations on the Moon, and on Jupiter and his Satellites. In July, 1610, he discovered Saturn's rings, only he did not know them as rings, a fact first made clear

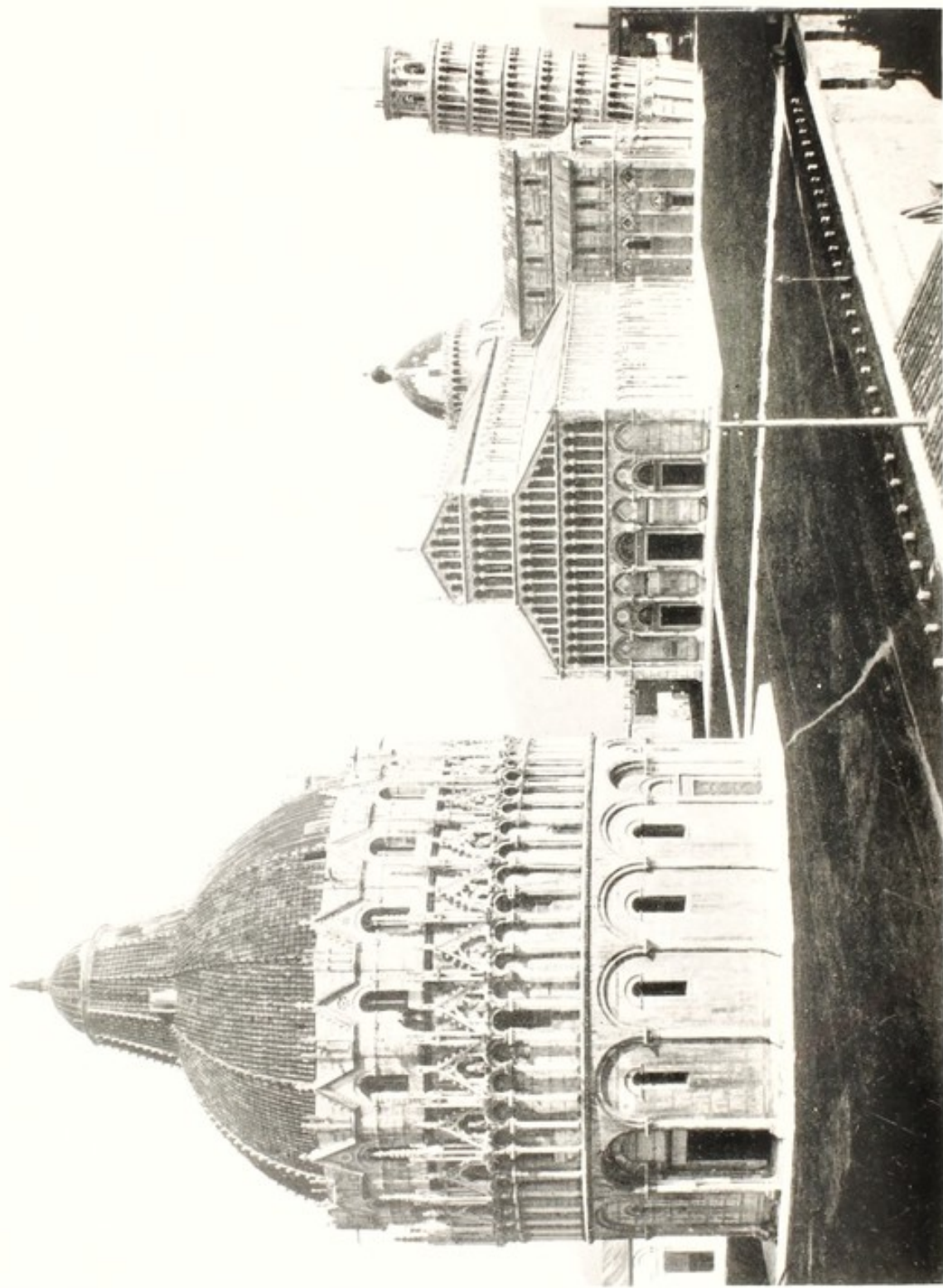
PLATE XIX.



Columbus

Portrait of Galileo as Columbus by G. B. Cipriani.
From an engraving by I. Godby.
(See page 89).

PLATE XX.



Leaning Tower of Pisa. From a photograph by Alinari.
(See page 92).

in Huygen's more powerful glass of 1656. On January 1st, 1611, he announced his discovery of the phases of Venus, and by the end of the following April he showed the Sun-spots to all the great people in Rome. In 1613, he published his observations on these solar phenomena in "*Macchie Solari*," a most controversial book.

His telescopic discoveries were dubbed celestial novelties, and were angrily disputed, at first more by jealous professors than by churchmen, but at each fresh novelty the jealousy of the one and the alarm of the other grew in violence, until the Aristotelian professors, the Jesuits, the political Churchmen, and those timid people who at all times dread innovation, were drawn together against the man who threatened them with too much knowledge. No longer able to combat his observations and deductions by asserting that the first were due to faults in his glasses, or to apparatus "devilishly designed to produce them," and that the second were vain-glorious and philosophically absurd, his enemies now took their stand on theology. After some months of underground agitation, Father Caccini of the Dominican Convent of San Marco, Florence, was the first to declare open war. Preaching on the fourth Sunday in Advent (December 21st, 1614), and selecting as his text Joshua x, 12-13, and Acts i, 11, he began with the words *Viri Galilaei, quid statis aspicientes in Coelum?* Galileo defended himself in long letters to Castelli, Piero Dini, and the Grand Duchess Cristina, which together constitute a powerful *Apologia*. The pith of his argument is contained in the saying of Cardinal Baronius, which he quotes:—"The Holy Spirit intended to teach us in the Bible how to go to heaven, not how the heavens go."

All through the year 1615, the agitation went on, denunciations were sent to the Holy Office in Rome, and the Inquisition began to make secret inquiries. At length, the situation became so alarming that Galileo, with the advice of friends, betook himself

to Rome. After weeks of alternating hopes and fears, the matter came before the Inquisition officially, with the result that, on February 26th, 1616, Cardinal Bellarmine was directed "to summon the said Galileo and admonish him to abandon the said opinions (of a revolving earth round a stationary sun), and, in case of refusal, the Commissary is to intimate to him, before a notary and witnesses, a command to abstain altogether from teaching and defending the said opinions, and even from discussing them. If he do not acquiesce therein he is to be imprisoned forthwith." Apparently, "the said Galileo" took the admonition in a becoming spirit, for we hear little or nothing of this *Processo* for the next sixteen years.

On the election of Cardinal Maffeo Barberini to the papacy as Urbano VIII, August 8th, 1623, Galileo decided to go to Rome to offer his congratulations in person, and to use his influence with the new Pope to obtain, at least, toleration for the Copernican theory, no longer subject to the weighty opposition of Bellarmine, who died two years before. Remembering the warmth of Barberini's regards for him in former years, he had much to hope from a pontiff so enlightened; he was encouraged, moreover, by hopeful reports from friends in Rome. But, owing to ill-health, bad weather, and worse roads, his departure was delayed, and he did not reach the Eternal City until April 1st, 1624.

All Rome, knowing the Pope's friendship for the new arrival, received him in a manner best described as correct, and Galileo's first letters home express great satisfaction with his reception by the Holy Father; but as regarded the real purpose of his visit he made no progress whatever. It was in the course of one of these interviews that the Pope brought in an argument, which was used with great effect a few years later. Discussing Galileo's contention that the tides were a proof of the revolution of the earth round the sun (its axial rotation was always conceded), his Holiness

wound up *his* case with the now famous syllogism—God is all powerful; all things are possible to Him; *ergo*, the tides cannot be adduced as the necessary consequence of the double motion of the earth without limiting His omnipotence.

With a heavy heart Galileo returned to Florence in June, 1624, loaded, however, with genuine signs of the Pope's regard, but which, in the circumstances, must have seemed to him like mockeries. His Holiness sent him a picture, and promised a pension for his son, then he sent two medals (one of gold, the other of silver), and quite a number of Agnus Dei. Not content with these tokens of his favour, his Holiness sent a letter, June 8th, 1624, to the Grand Duke in praise of Galileo's services to science, "the fame of which," he said, "will shine on earth so long as Jupiter and his Satellites shine in heaven."

Between 1624 and 1632, Galileo, undaunted, went on preaching "novelties" of one kind or another, mostly of the polemical order, until the climax came on the publication of his "Dialogo . . . Sopra I Due Massimi Sistemi Del Mondo," Fiorenza, 1632. The book was denounced at once as a defence of the Copernican theory under the flimsiest of disguises — as a gross violation of the admonition and decree of 1616—as an insult to the Pope himself. *He* was Simplicio, the Simpleton! Was not his unanswerable argument of 1624 put into the mouth of a simpleton, and dragged in at the end of the book, only to be summarily dismissed with a pious ejaculation?¹

¹ On the title-page they saw another veiled insult. At the bottom is a device of three dolphins, surrounded by a band bearing a motto and the monogram $\frac{G.B.}{L.}$ the whole being the business mark of the printer, G. B. Landini, and appearing on most of his publications. This title-page, they said, was not submitted to the censors, and, with more malice than wit, they asked the meaning of the three dolphins; they reminded them so much of the three bees of the Papal arms!

After this preliminary skirmish came the main charge that Galileo dared, after solemn warnings, to interpret the Scriptures to his own ends. It was bad enough, they said, to upset the old knowledge and spoil the face of nature with his celestial novelties, but he must be taught to leave the Bible alone. In this he was rebellious against Mother Church, and, further, he was deceitful in that he obtained the *Imprimatur* by withholding material facts from the censors. The poison had done its intended work, and, although the safety of the Church and the vindication of its decrees were the ostensible reasons for the subsequent proceedings, it would not be far from truth to say that revenge for an (imagined) insult was the determining factor.

On September 23rd, 1632, Galileo was ordered to appear before the Commissary-General of the Holy Office in Rome in the course of the following month. His friends pleaded his age and infirmities and the inclemency of the season, and begged that he might be examined in Florence; but all to no purpose, the answer came "In Rome he must appear, and as a prisoner in chains if he will not come willingly." On January 20th, 1633, he set out from Florence, halted twenty days in great discomfort at the frontier on account of quarantine, and arrived in Rome on February 13th. For the next four months the process dragged on. Galileo himself was inclined to resist, his friends besought him to submit, he was hauled backwards and forwards by his judges, questioned here and threatened there, the threat being a "rigorous examination," an euphemism for physical torture. At last, on June 22nd, 1633, sentence was pronounced, and Galileo made his pitiful abjuration "in penitential garb."¹

¹ Here it was that Galileo is said to have muttered the (now famous) words: *E pur si muove*, as he rose from his knees and turned to leave the hateful chamber. Doubtless he thought so, but that he ever uttered them is very improbable, considering the circumstances of time and place. *Se non è vero è ben trovato*.

Comparing the fates of Giordano Bruno and Galileo, a writer (John Wilson), in the "Quarterly Review" (Vol. 145, 1877-78), says:—"The Roman Inquisition successively pounced on both, though not with equal excess of severity. It burned Bruno in Rome, 17 February, 1600, and never, certainly, had it lighted on human fuel more manifestly predestined, in that age, to burning. It only intimidated Galileo into solemn and deliberate perjury, into abjuration of truths he had clearly demonstrated, and continued to hold as his persecutors perfectly well knew, and, therefore, by extorting verbal abjuration from a harassed and infirm old man, they made themselves mainly responsible for the hollow and hypocritical performance of what can only be designated as a most impious and sacriligious farce."

Galileo was never tortured (mentally yes, physically no), and was never consigned to the dungeons of the Inquisition as old writers have asserted. After his recantation he was "banished" to the Villa Medici, Trinità dei Monti, which he was to consider as his prison. A week later, he was allowed to proceed to Siena on parole, and until further orders, where, in fact, he was treated as an honoured guest by the Archbishop, Ascanio Piccolomini, an old pupil in Padua. Finally, on December 1st, 1633, he was allowed to return to his own house in Arcetri (Il Gioiello) outside Florence, where for the rest of his life he was under *surveillance*—"prisoner of the Inquisition" as he called himself to the last.

¹ Cf. GALILÉE par Th. Henri Martin, Paris, 1868, pp. 197-9; De Morgan, Antegalileian Copernicans, in Companion to the Almanac for 1855, pp. 23-5.

II.

LE JUGEMENT DE GALILÉE
BY TRIQUETI, 1833.

Of this painting by Henri de Triqueti we have no information beyond a passing reference in the "Grand Dictionnaire Larousse," where it is stated that the picture was shown at the Paris Salon in 1833.

III.

CONDAMNATION DE GALILÉE,
1840.

Of this, also, we know no more than that it was engraved about 1840. There one sees Galileo standing, his right hand raised with forefinger extended, as if he were uttering sentiments akin to that now crystallised in the words *E pur si muove*. The Pope, sitting on a throne and surrounded by mitred bishops, shows surprise and horror (or is it vexation?). A prelate, sitting apart, is writing, and another, standing by the throne, is holding a large volume, perhaps Galileo's incriminating "Dialogo" of 1632.

IV.

GALILÉE DEVANT LE SAINT-OFFICE
BY ROBERT-FLEURY, 1847.

A large *tableau* by J. N. Robert-Fleury. It was shown in the Louvre Exhibition in 1847; later, hung in the Luxemburg Gallery until about 1910; and is now in the Louvre. It is a large canvas in two parts. The upper part shows Galileo kneeling before an altar on which the Eucharist is exposed, and surrounded by a

crowd of popes, cardinals, priests, and, as I suppose, nuns, all in various attitudes of excitation. Below, in the foreground, Galileo is standing by a reading desk, on which is a large closed volume. His left hand, open, rests on the book, while his right arm and clenched fist are drawn up as if protesting. The face with drawn eyebrows has an angry, threatening expression. The whole attitude, in fact, is one of defiance rather than one of humble and contrite submission.

A French critic says:—"Le moment choisi par le peintre est celui où le grand homme se relève après avoir abjuré sa découverte, les mains sur l'Évangile; le remords d'avoir trahi la vérité le saisit: les yeux fixés vers la terre, il s'écrie, en la frappant du pied, cependant elle se meut! (E pur si muove). Auprès du vieillard illustre, à gauche, un homme d'armes, un bourreau en cuirasse, semble prêt à étendre sa main de fer au moindre signe de la Sainte Inquisition. A droite, devant un autel chargé de chandeliers d'or, se tient un cardinal qui préside à l'abjuration; il garde une attitude froide, impassible, tandis qu'un jeune prêtre, son acolyte, lève les yeux au ciel comme scandalisé par le blasphème du philosophe. Au fond de la salle, les juges et les hauts dignitaires de l'Eglise témoignent, par l'expression de leurs physionomies et par leurs attitudes, les sentiments de surprise, d'indignation, de colère, dont ils sont animés. Ce tableau a été exposé pour la première fois au Salon de 1847, et a obtenu un grand succès dû principalement au sujet qu'il représente. La composition est bien ordonnée, l'exécution a une grande solidité, mais la couleur manque de variété, de légèreté, et de transparence" ("Atti Del Reale Istituto Veneto," Vol. 73).

A large engraving, 36 in. by 23 in. plate measurement, is sometimes met with in the market, inscribed *dipinto da Robert-Fleury, incisione diretta e terminata da L. Calamatta*. This fine

engraving has been reproduced in (1) "Historians' History of the World," Vol. 9, p. 493, (2) "Nouveau Dictionnaire Larousse," *Verbo*, Galilée.

V.

RÉTRACTION DE GALILÉE

BY CABASSON, *circa* 1850.

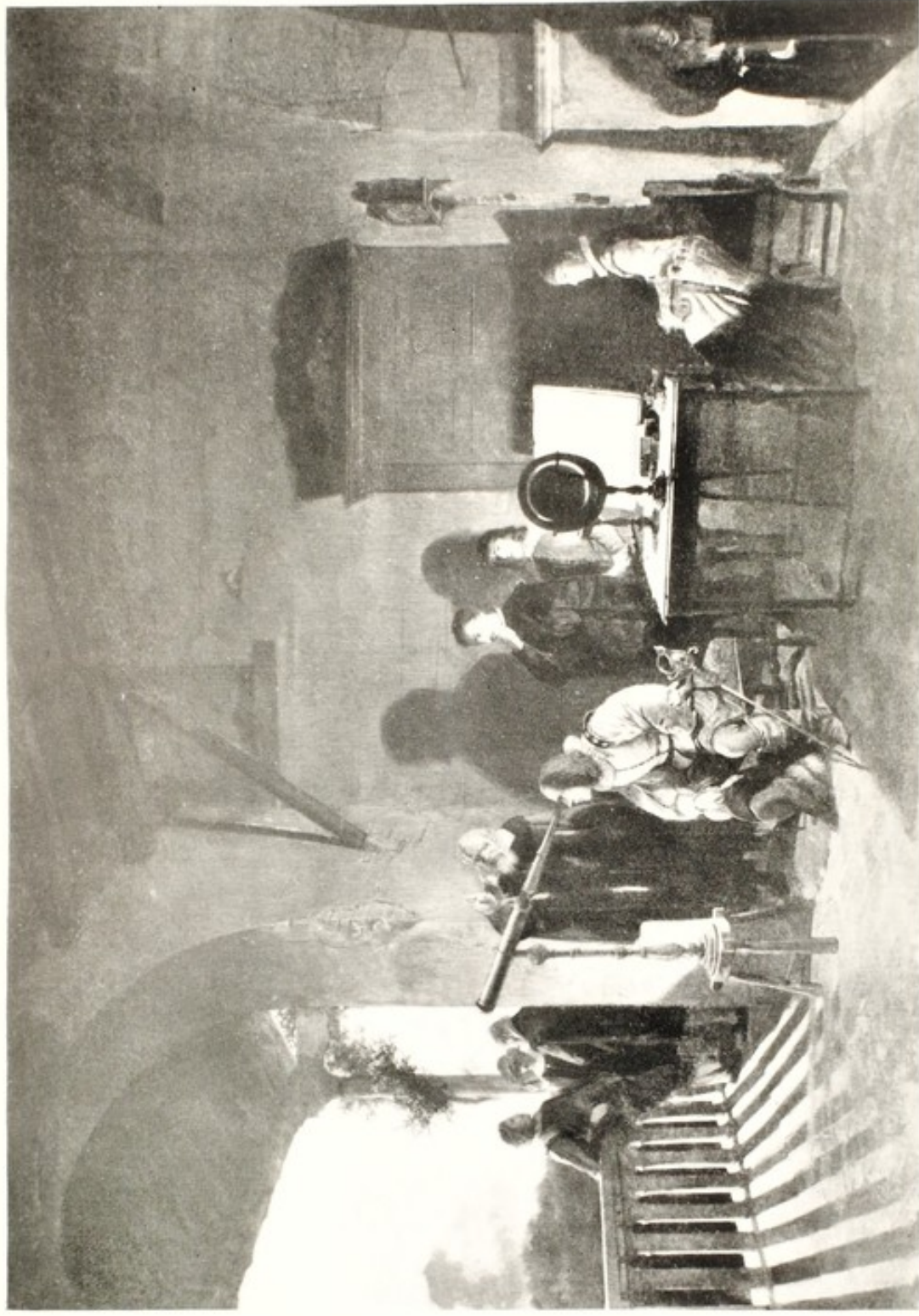
We know this only by an engraving, inscribed Cabasson del, Lechard sculp., and published about the middle of the last century by J. B. Boussard, Rue Richelieu, Paris. Galileo is standing by a high table or altar, on which lies an open book, the Holy Bible; his left hand is on the book, while the right grips the lapel of his fur-edged coat. The expression is that of a bewildered man. A hooded monk stands opposite, who, with scowling face, points a finger to the floor, as if asking in derision, Does it still move? In the background is a crowd of Dominican monks, one at a table is writing, and behind him on a raised chair sits a cardinal in an uneasy attitude. To my view, this is a more effective picture—has more of reality about it—than the overlaid canvas of Robert-Fleury.

VI.

GALILEO DINANZI L'INQUISIZIONE

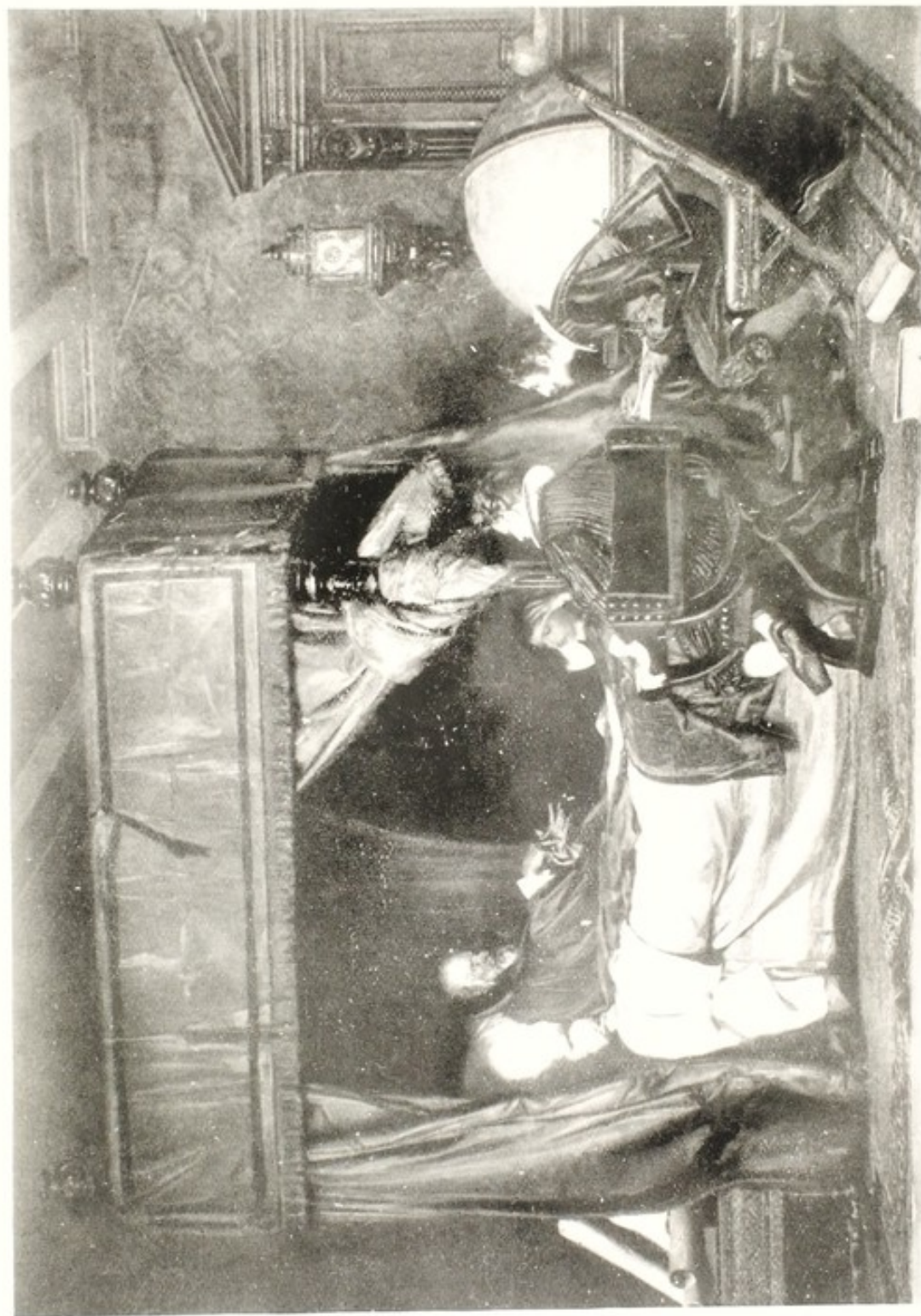
BY BANTI, 1857.

This picture by Cristiano Banti was shown in the Florence Exhibition of 1857. An engraving, inscribed G. Marrubini diseg. L. Paradisi inc. was published at the same time, and copies were awarded as prizes to students of the Promotrice Fiorentina.



Milton visiting Galileo by Annibale Gatti. From a photograph by Alinari.
(See page 99).

PLATE XXII.



Galileo and his Scholars by Niccolò Barabino in the Palazzo Orsini, Genoa.
From a photograph by A. Fuzetti.
(See page 100).

Galileo is represented too young, about forty years old instead of sixty-nine. The face shows defiance, and the attitude—indeed the whole composition — is rather suggestive of melodrama. Opposite the central figure are three Dominican monks, one, standing, is pointing to an open book in a way admitting of no contradiction, the other two are expectant, and seem to be dreading the culprit's non-compliance.

VII.

L'ABJURA DI GALILEO
BY SQUARCINA, 1870.

Favaro says that this huge canvas, 19 ft. by 13 ft., by Giovanni Squarcina of Venice, should help to immortalise him judged only by its superficialities; but, really, he deserves great credit on other grounds. He spared no pains or expense in collecting materials for his work. He went to Bologna, Florence, and Rome to procure authentic portraits of cardinals, priests, and monks, in the appropriate costumes of the period, and even made a detailed plan of the Great Hall in Santa Maria sopra Minerva, where the scene is laid.

Before a table is seated Father Vincenzo Maculano da Fiorenzuola, Commissary of the Holy Office. Galileo faces him in the act of repeating the form of abjuration which has just been read to him by the Master of the Sacred Palace. He places his right hand on a Bible without looking at it until one of the Inquisitors calls his attention to it. The harried philosopher seems inclined to withdraw his hand from the Sacred Volume, and casts a despairing look on an upturned globe. The seven cardinals (out of the ten judges) who signed the sentence are shown—Barberini, Verospi, Ginetti, Scaglia, Gessi, Centini, and

Bentivoglio, who is hiding behind his back some papers, as if to save them from a brazier on which a monkish figure is casting others. This is in allusion to the fact that Bentivoglio (an old pupil of Padua days) was the only one of his judges inclined to leniency. This grand picture was finished in 1870, and was exhibited in the large hall of the Palazzo Naya in Venice. There Professor Favaro saw it in the company of the artist, then nearly blind, and a few months before his death.¹

VIII.

GALILEO DINANZI L'INQUISIZIONE
BY CHELLI, 1880.

This painting by Professor Carlo Chelli of Leghorn was done about 1880. An engraving after it by Giovanni Boschi was published in Leghorn by Francesco Vigo in 1885, and again in 1886 by the same firm.

The scene is laid in a chamber of the Holy Office. In the foreground are three Dominicans, one of whom, seated, is regarding the imposing figure of Galileo, and, with upturned eyes and outstretched hands, seems to be imploring the Almighty to direct his judgment. The second is trying to convince the culprit of the error of his ways, pointing to the Holy Bible whose words must be accepted without question. The third and youngest seems to be troubled in mind. With head bent and supported by the left hand, he is intently examining a paper, on which is traced the system of the world according to Copernicus.²

¹ "Del Quadro L'Abjura Di Galileo E Del Suo Autore per Dottor de Pavissich," Venezia, 1892.

² Giovanni Boschi: "Galileo Dinanzi Al Tribunale Della Inquisizione (Quadro Del Prof. Carlo Chelli Di Livorno)," Livorno, 1866.

IX.

GALILEO AL TRIBUNALE DELL' INQUISIZIONE
BY BARABINO, *circa* 1880.

The last of our pictures depicting the Abjuration scene of June 22nd, 1633, is by Niccolò Barabino in a lunette of the Palazzo Celesia, Genoa. For long it was the most popular painting in Italy, and was reproduced frequently on postcards, snuff-boxes, and such like articles.

In this fine fresco one sees at the back and round a table seven of the ten cardinal judges, and a few officials in Dominican garb. Three of the judges are seated, and are intently studying marked passages in books. The other figures are grouped round a large globe, on which one of them is pointing out the path of the earth round the sun according to Galileo. All are perplexed and are trying to convince themselves of the justness of their sentence. In the foreground Galileo has risen from a chair and is walking with uncertain step towards a door, the heavy curtain of which is held back by a helmeted figure—a familiar of the Inquisition. When half-way he strikes the floor with a stick in his left hand, and points downwards the right hand with forefinger extended, as if to say, it moves notwithstanding my abjuration!

REPRODUCTIONS.

(1) This picture has been reproduced by photo-calciographic process, and published by A. Fusetti, Art-editor, Milan. (2) In *tarsia*, by Vincenzo Garassino, a celebrated woodcarver of Savona (Liguria), who died in 1888. This is an exceedingly interesting work in *tarsiatura* (inlaid work); it measures 1.80 by 1.17 metres, and consists of about 500 separate pieces of wood in their natural colours. The work was for many years on loan in the Museo

Civico, Savona. It was withdrawn in November, 1925, and is now in the possession of the artist's son, Professor Giuseppe Garassino of Savona, who, I understand, is willing to dispose of it at a big price. In kindly supplying me with this information and an excellent photograph, the Professor adds that among his early recollections is a visit from "Lord Douglas," which resulted in an order for some carved woodwork (*un coro*) for his private chapel in Scotland. The choir stalls in the Cathedral Church of Savona; in the Sanctuary Church of Nostra Signora della Misericordia (a few miles from Savona); and in the Church of San Lorenzo in Genoa, are by the same artist; and among his many minor works may be mentioned the beautiful reading-desk, which the people of Savona presented to Pope Leo XIII.

X.

GALILÉE EN PRISON

?BY MURILLO, 1645.

For over two hundred and eighty years, there has been preserved in Belgium a painting the significance of which has only recently (1911) come to be valued. It is a work of historical interest, and, if present opinions hold good, of great value from an artistic point of view. The subject is Galileo in prison after his trial and condemnation, and the painter is supposed to be Murillo, the fellow-citizen and pupil of Velasquez.

Its history is briefly this: from an inscription on the frame it belonged originally to a Piccolomini, a member of the great Siena family of that name, which gave two Popes to Rome (Pius II and Pius III), and which, from as far back as the fourteenth century,

had played many roles in the science, arts, and politics, of Italy. We have had occasion to mention one member, Ascanio, Archbishop of Siena, as a devoted friend of Galileo. His brother Ottavio, born 1599, was a soldier, and, after serving some time in the Spanish army in Italy, quitted his native country, and entered the service of Austria (1631), where he saw much hard fighting during the 'Thirty-years' War. After the battle of Leipsic (1642), where he was badly beaten by the Swedes under Torstenson, he quitted the imperial army, and, in the following year, re-entered the service of Spain. While residing in Madrid, whither he was called, General Piccolomini would know Velasquez, then at the height of his fame, and his young pupil Murillo (born Seville, 1618). We have no evidence, but it is supposed that about 1643 Piccolomini commissioned Murillo to paint this picture of Galileo, his fellow countryman and, probably, personal friend, seeing that they were near neighbours in Florence and Siena. As it is certain that Murillo never left his native Spain, and, therefore, never saw Galileo, the painting must have been done from an existing portrait imported from Italy¹; but which one? Professor Favaro is inclined to think, judging from the features, that it was a copy of Passignani's portrait of 1624, conveniently made to look ten years older.

About 1645, Piccolomini was appointed General-in-Chief of the Spanish forces in Flanders, and, as we must assume, carried with him his precious picture. His active career ended with the Peace of Westphalia, 1648, when he was created a Prince of the Empire, and retired to Vienna, where he died in 1656. Of the further history of the painting we must suppose that it remained behind in Flanders, and, passing through various hands, came

¹ The signature and date now faintly seen on the canvas are disputed. Some read B. E. Murillo, 1646, others R. Donzello, or R. Daniello, and all are doubtful as to whether the last cipher of the date is 3 or 5.

ultimately (1911) into the possession of Mr. Jules Van Belle of Roulers.¹

So much for history; now looking at our photograph, the reader will notice that the margins all round were covered by a later and smaller frame, and covered more on the right side than on the left. One might suppose that this was a simple case of making the canvas fit the frame, but Van Belle and his friends conclude that the motive was a weightier one than mere thrift. The covering was done of set purpose, in order to hide the "writing on the wall," and so save it from destruction, and its owner from the pains and penalties ordained for harbouring the effigy of a relapsed heretic.

With a good lens the Belgian experts see Galileo seated with his right arm resting on a table, on which are a thick volume and a small piece of mechanism (an astrolabe, or a piece of clockwork). Between finger and thumb he holds a nail, with which he has just drawn on the wall of his prison some figures and words of great import. The large figure shows the sun within an ellipse along which the earth is travelling. He thus delineates afresh the odious and pernicious heresy of a revolving earth round a stationary sun, which heresy he had been forced to recant on bended knee, and for which he is now here in durance vile. Near this is seen a small circle, supposed to be Saturn with his ring as Galileo knew it, and another figure in faint outline, imagined to be Venus in phase, or Jupiter with his satellites.

Just under the large figure appear the words *E pur si muove!* Now, it is this famous phrase which gives to the picture all its value in the eyes of Galileian scholars, for it had come to be regarded as apocryphal by all recent biographers. Until the

¹ Fortunately, Van Belle's art treasures escaped the ravages of the Great War. They were packed up just in time and were hidden away in the caves of the Société Générale de Belgique, Brussels.

Roulers picture was brought to light the earliest printed mention of the phrase was traced to Giuseppe Baretta,¹ a native of Turin, but long resident in England, and the friend and correspondent of Samuel Johnson. We can now go back some 112-14 years to 1643, or a short time after Galileo's death in 1642. So, we must revise our judgments, and conclude that Galileo *did* utter these words, not, however, in the awful chamber of the Inquisition, as the fable has it, but to some sympathetic friend outside, from one of whom, doubtless, Piccolomini had them.'

XI.

GALILÉE EN PRISON
BY LAURENT, 1822.

In the "Grand Dictionnaire Larousse," *verbo* Galilée, one reads:—"A *tableau* by J. A. Laurent, shown in the Salon of 1822, and afterwards in the Luxembourg Museum, represents Galileo in prison. The philosopher has just drawn on the pillar of his dungeon a design of his astronomical system, and more convinced than ever of its truth he seems to be repeating those famous words *E pur si muove*. This composition obtained much success from its first appearance, but the execution is mediocre. It has been engraved *au burin* by Dien and by Chollet, and *au trait* by Reveil in the "Galerie Des Arts," Vol. VIII, plate 126."

After a long hunt in the public libraries and museums of Italy, France, and England, Favaro was unable to find a copy of the "Galerie Des Arts," and even the Maison Larousse could not

¹ See his "Italian Library," London, 1757, p. 52.

² Jules Van Belle: "Galilée et son Immortel *E Pur si Muove*." Roulers, 1912.

help him. Then he caused a search to be made among the print-sellers in Paris, and at long last, in 1913, he procured a copy of Dien's engraving.¹

It is inscribed *Galilée E pur si muove*. It shows a dark dungeon cell with vaulted ceiling, lighted by one small window heavily barred, near which stands a jug of water and a piece of bread. Galileo is standing by a pillar in a heavy fur-edged cloak—apparently a man of forty years instead of sixty-nine, with thick beard and a mass of curly hair—all utterly untrue to reality. The left hand rests on a book on a rude table, the right holds a porte-crayon close to the pillar on which he has just drawn two figures; the smaller is a geometrical design, the larger shows the earth revolving in a wide circle round a central sun. Below the latter is an iron ring from which hangs a heavy chain. Behind the figure of Galileo is a rude wooden bench or bedstead over which a blanket is thrown. High up on the wall there is seen a Crucifix crowned with thorns.

About the same time I found a reproduction of, probably, Chollet's engraving in "The Eclectic Magazine," New York, Vol. 30, 1853.

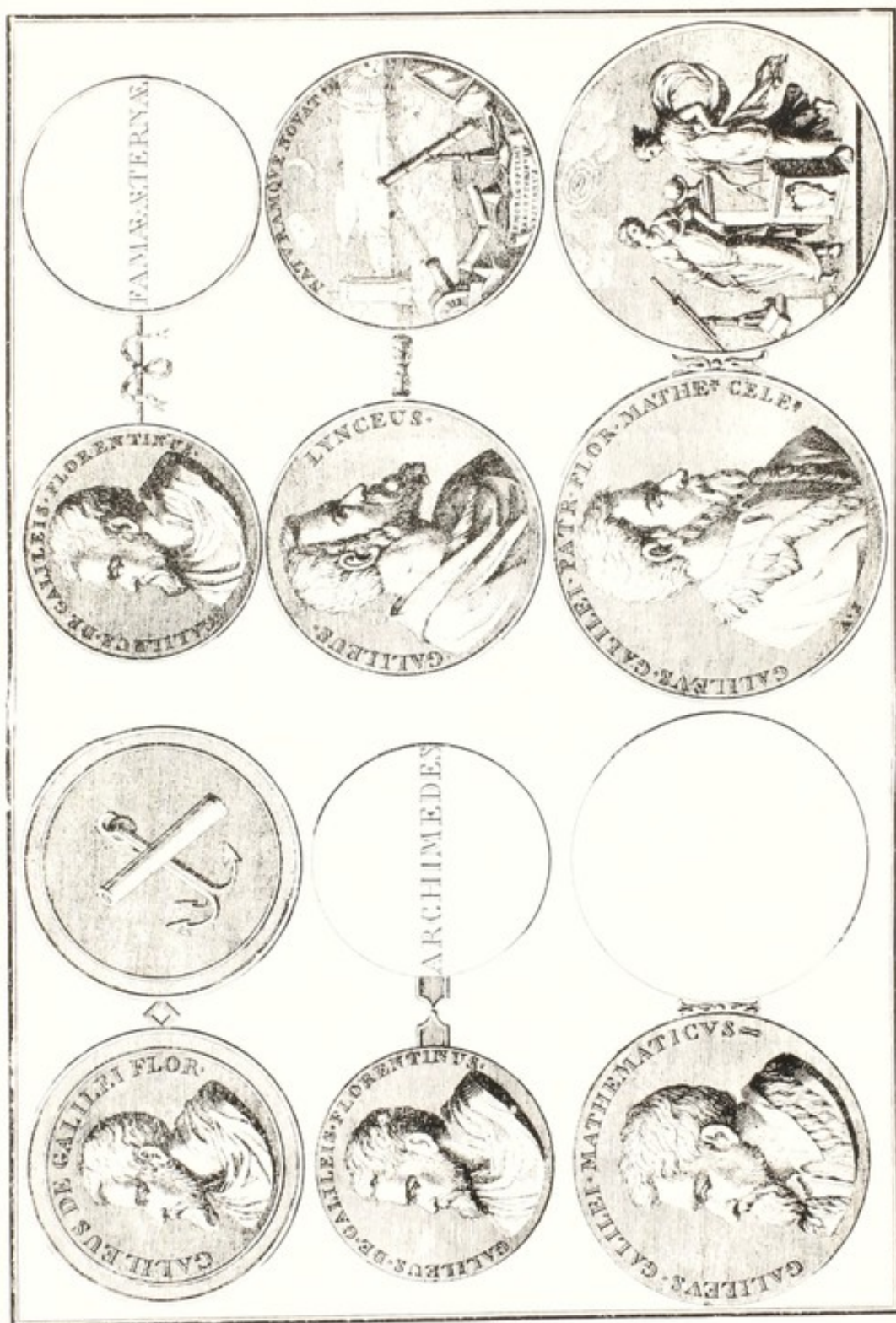
It appears as frontispiece to the volume, and is inscribed *Galileo in Prison*. There is no name of painter or engraver, but in the Table of Contents I found "Engraved by Sartain." The

¹ In reference to these quests Favaro has some words, to which, I think, most researchers can say Hear, hear!—"Ma di fronte alle gentili prestazioni di qualche volonteroso, che con ammirevole premura mi venne in aiuto, quanti e quanti restii alle più vive sollecitazioni; quante domande, benchè accompagnate da coupons-reponse, o da equivalente, rimaste senza risposta, e quante risposte incomplete che obbligavano a repliche le quali finivano per stancheggiare e chi domandava e chi avrebbe dovuto rispondere! Bisogna aver condotto una inchiesta di simil genere per formarsi un giusto concetto di tutta la pazienza e di tutta la costanza che conviene adoperare per giungere a capo di qualche cosa."



Milton and Galileo in Arceti by Tito Lessi.
From an engraving by A. Mathey-Doret.
(See page 102).

PLATE XXIV.



Medals (6) collected by Nelli, and engraved in his "Vita e Commercio Letterario di Galileo," 1793.
(See page 105).

brothers S. and J. Sartain did many of the illustrations prefixed to the volumes of this magazine, and all in the same very dark ground. This differs in detail from Dien's print. It shows nothing of the ring and pendant chain, nor of the bread and water-jug, and instead of a rude bench there is a chair from which Galileo has just risen.

Later, I "picked up" in London a small engraving, probably Reveil's *au trait*. It shows no accessories, only Galileo, crayon in hand, standing by the pillar, on which are drawn two astronomical figures. The larger shows a central sun and a wide circle round which the earth with attendant moon is revolving. The plate measures 3 in. by 3½ in., and is pasted on a sheet 6¼ by 9¼ in., the top edge of which is gilt, as if taken from some volume misnamed by Larousse the "Galerie Des Arts." At the bottom of the print Galilée is pencilled in a French hand.

XII.

MILTON VISITING GALILEO IN PRISON

BY S. A. HART, 1836.

Solomon Alexander Hart was born in Plymouth in 1806. As a young man he went to Italy, visiting all the great centres of art, and brought back a large number of studies which he used in his pictures of Italian history and scenery. Amongst them are Columbus as a boy conceiving the idea of a New World; the interior of St. Mark's, Venice; introduction of Raphael to Pope Julius II; and Milton visiting Galileo in prison.

The last-named was painted about 1836, but of its further history I can find no trace. We must judge it, therefore, by the

fine wood-engraving made after it by W. J. Linton, the most eminent and, perhaps, the last of our great wood engravers. The British Museum (Print Room) has a Proof Copy before all letters. It measures $22\frac{1}{2}$ in. by $17\frac{1}{2}$ in., and bears a small pencil inscription in the author's handwriting: "Milton visiting Galileo in prison at Florence. Painted by S. A. Hart, R.A." On a large open volume in the left bottom corner is inscribed Linton sc.

Remembering the circumstances of this historical event, we find this picture disappointing in that the faces and attitudes of the chief actors give no indication of the parts they are playing. We see Milton, book in hand and hat under arm, entering a small chamber by a descending step, and closely followed by a monk, who is holding back the heavy door with his left hand, while in the right he carries two large keys—the only suggestion there is of a prison chamber. Milton's features are expressionless, no sign there of eagerness, or of awe, or of pleasure at the consummation of his long-felt desire. The eyes are downcast and averted, where one would expect to see them lighted up, and riveted on the great man whose hand he is about to grasp. Galileo is seated at the farther side of a massive table in the centre of the room, on which are an hour-glass, inkstand, books, and loose papers. Before him is a book-rest holding a large open volume, which we must suppose he has been reading, although he had been blind for some months previously. Here again the attitude is not appropriate to the occasion. It does not suggest that of a man receiving a distinguished visitor from beyond the Alps; it is rather that of a weary and perplexed reader, absorbed in his own thoughts, and unconscious of, or indifferent to, a visitor's entry. As in Milton's case, the eyes are looking elsewhere. Evidently, the time is winter, or the temperature of the chamber is chilly, for "the prisoner of the Inquisition" is wrapped in a heavy fur-edged cloak reaching to his ankles, and near by is a large brazier and a good supply

of charcoal. Behind the figure in the corner is an old-fashioned four-poster bed. On the top of a chiffonnier, against the north wall, is a telescope; and beside it (on the wall) is drawn in charcoal an astronomical design—a small central body, the sun, and a wide enclosing circle, carrying other small bodies, one of which is crescent-shaped.

The scene was, probably, inspired by Milton's visit to Galileo in Arcetri in 1638, of which he speaks in "*Arcopagitica*" (1644), but makes no mention of his blindness — perhaps from a nice feeling of delicacy:—

"And lest some should persuade ye, Lords and Commons, that these arguments of learned men's discouragement at this your Order are mere flourishes and not real, I could recount what I have seen and heard in other countries, where this kind of inquisition tyrannises; when I have sat amongst their learned men, and been counted happy to be born in such a place of philosophic freedom, as they supposed England was, while themselves did nothing but bemoan the servile condition into which learning amongst them was brought; that this was it which had damped the glory of Italian wits, that nothing had been there written now these many years but flattery and fustian. There it was that I found and visited the famous Galileo grown old, a prisoner to the Inquisition for thinking in astronomy otherwise than the Franciscan and Dominican licensers thought.¹

"There unseen

In manly beauty Milton stood before him
Gazing with reverent awe—Milton—his guest,
Just come forth, all life and enterprise;

¹ According to the Milan "*Natura ed Arte*" (15 September, 1894, p. 714), Milton had a letter of introduction from Hugo Grotius the celebrated Dutch patriot and jurist, then Swedish ambassador in Paris; but there is no record of such letter in Favaro's "*Carteggio Galileiano*." In fact, one letter only from Grotius to Galileo is mentioned, under date September, 1636.

HE in his old age and extremity,
 Blind, at noonday exploring with his staff;
 His eyes upturned as to the golden sun,
 His eyeballs idly rolling. Little then
 Did Galileo think whom he received;
 That in his hand he held the hand of one
 Who could requite him—who would spread his name
 O'er lands and seas—great as himself, nay, greater;
 Milton as little that in him he saw,
 As in a glass, what he himself should be,
 Destined so soon to fall on evil days
 And evil tongues—so soon—alas, to live
 In darkness, and with dangers compassed round,
 And solitude.”¹

XIII.

CAPTIVITÉ DE GALILÉE

BY MÜLLER, 1867.

Professor Favaro has a short note of this painting with which we must here be content. “In the Paris Salon of 1867, there was shown a picture by Carlo Müller, entitled *Captivité de Galilée*. We have seen an engraving after it from the design of Rousseau, and by our notes we are reminded of having seen a poor lithograph of the same subject, bearing the names of the publishers, Righi e Betti, but we cannot remember if it was done from the painting” (“*Atti Del Reale Istituto Veneto*,” Vol. 72).

¹ Rogers: “Italy,” London, 1830 (Campagna of Florence). A poem of 23 pages on Milton’s visit is in *The British Museum* (Press Mark, 1466g. 47(3)).

XIV.

GALILEO IN PRISON

BY VON PILOTY, 1870.

Carl Von Piloty, born in Munich in 1826, had his first lessons in art from his father. He then entered the Munich Academy (of which he ultimately became Director), and, later, came under the influence of his brother-in-law, Carl Schorn. In his early twenties he travelled in Belgium, France, and England, and in 1853 painted his first great work, *The Nurse*, followed by a long list of others.

His *Galileo in Prison*, which, presumably, is somewhere in Germany, was reproduced in "*The Portfolio*" (1878, Vol. 9, p. 72), to illustrate an article by J. B. Atkinson on the Schools of Modern Art in Germany. The engraving was done especially for this article, and was approved by Director Von Piloty, so we may take it to be a faithful copy of his painting. It is inscribed *Carlo Piloty pinx. Fr. L. Meyer sc.*

GALILEO.

Galileo is standing by the wall of a narrow cell, the right hand holds a stout nail, or stick of charcoal. The eyes are cast down to a design on the floor, on which he had been working, and is now regarding in a restful attitude, and as if about to resume his work. The design consists of three concentric ellipses and three tangential lines. Within the innermost ellipse are the letters SO[L]. The cell is lighted by a high heavily-barred window, through which two figures are watching the movements of the prisoner. Below the window is a large iron ring let into the wall, and in the left corner a rude bedstead with coarse mattress, from which straws are protruding, and, over all, a heavy coverlet. Beside the bed is a large earthen vessel of the amphora kind. As

a composition the artist does not show much originality, and the resemblance to Galileo is but slight.

Here we come to the end of our Inquisition and Prison scenes. The remaining pictures of which we have notes are of various kinds, and will be dealt with in order of time in the following sections.

XV.

GALILEO IN THE UFFIZI CORRIDOR, 1745.

In the third corridor of the Uffizi Gallery, outside the Sala del Baroccio, a compartment of the frescoed ceiling is filled with portraits and various mathematical and astronomical instruments.

The portraits are those of Galileo, Guido Bonatti, Francesco Giuntini, Paolo Matematico, Evangelista Torricelli, and Vincenzo Renieri, the two last being disciples of Galileo. The artists are Pieroni, Buti, and Bezelli.

The portraits were reproduced in "*Azioni Gloriose Degli Uomini Illustri Fiorentini . . . Nelle Volte Della R. Galleria Di Firenze*," Firenze, 1745. Plate 25, designed by Joseph Menabuoni and engraved by Francesco Zucchi, shows Galileo, telescope in hand.

XVI.

FIRST EXHIBITION OF THE TELESCOPE.

FROM "*LE SPECTACLE DE LA NATURE*," 1746.

Leaving aside the disputed question of the first inventor of the telescope, it will suffice for our present purpose to show Galileo's share in the invention. Writing from Padua, August 29th, 1609,

to his brother-in-law, Landucci, in Florence, he says:—"You must know about two months ago, a report was spread here that in Flanders a spy-glass had been presented to Prince Maurice so ingeniously constructed that it made distant objects appear near, so that a man could be seen plainly at the distance of two miles. This result seemed to me so extraordinary that it set me thinking, and very soon I made a spy-glass which far surpasses the report of the Flanders one. On this news reaching Venice, I was summoned before the SIGNORIA, and exhibited it to them, to the great astonishment of the whole Senate. Many nobles and senators (although of great age) mounted more than once to the top of the Campanile to see sails and ships, then so far off that two hours elapsed before they were seen (without my spy-glass) steering into the harbour; for the effect of my instrument is such that it makes an object fifty miles off appear as if it were only five miles away. Knowing the great utility of such a contrivance in naval and military operations, and seeing that his Highness, the Doge, desired to possess it, I resolved, on the 24th instant, to go to the Palace, and present it as a free gift. On quitting the presence chamber, the Procurator (and one of the heads of the University) came and, taking me by the hand, said that the Senate, knowing how well I had served it for seventeen years in Padua, and sensible of my courtesy in presenting so valuable an instrument, had just decreed my election to the professorship for life, with a yearly salary of 1000 florins, and, as there yet remained a year to terminate my present period, they willed that the increased salary should begin on that very day."

This precious instrument has long since disappeared. It consisted of a leaden tube of about 70 cm. long and 45 cm. diameter, fitted with a plano-concave eye-glass and a plano-convex object-glass, with a magnifying power of three diameters, thus making distant objects appear to be three times nearer, i.e. nine

times larger. During the autumn of 1609 Galileo greatly improved this spy-glass. Soon after his return to Padua, he had made a glass with a magnifying power of eight diameters, enlarging sixty-four times, and, a little later, one of a power of twenty diameters, enlarging four hundred times, with which he made his first observations on the moon. By the early days of January, 1610, he had constructed a still more powerful instrument, "sparing neither labour nor expense," which showed distant objects more than thirty times nearer and one thousand times larger. With this he not only completed his observations on the moon, but discovered Jupiter's satellites, added largely to the number of stars in the more conspicuous constellations, as Orion and the Pleiades, and resolved parts of the Milky Way into countless numbers of minute stars, rightly inferring that as a whole it derived its singular whiteness from the innumerable stars so small that his glass was not powerful enough to separate them.

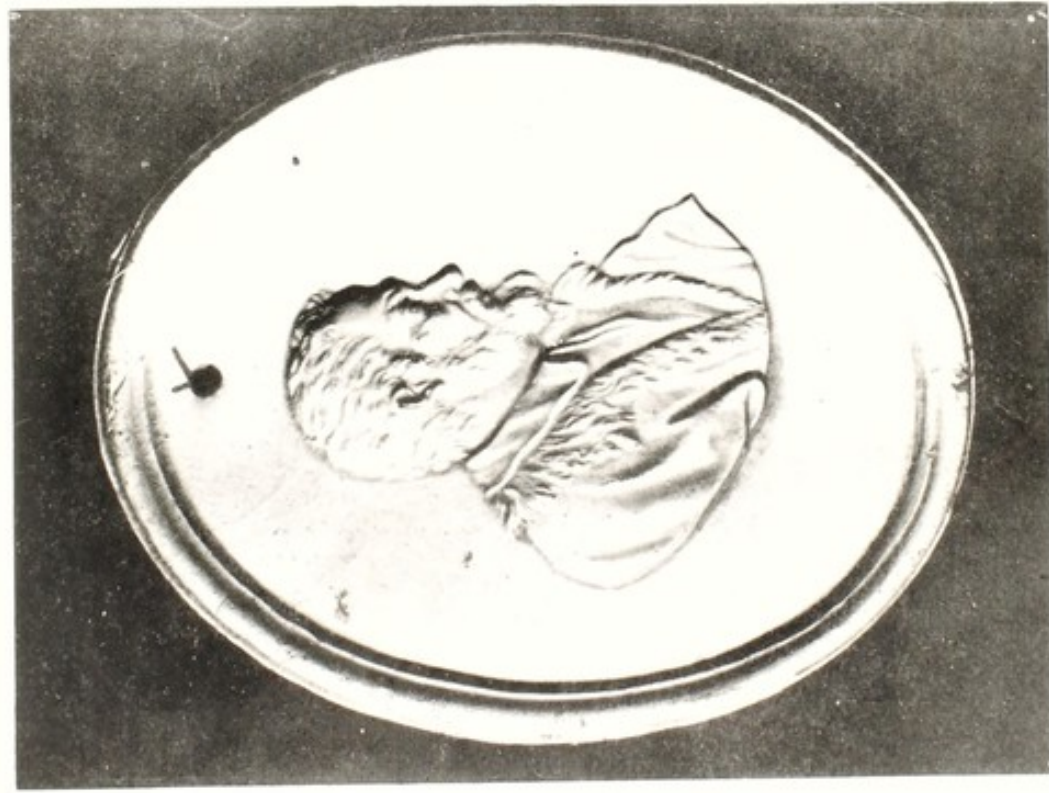
As the news of these discoveries spread abroad, the popular excitement grew apace. Girolamo Sirturo, a friend of Galileo, described the excitement in Venice as amounting to frenzy; and in Florence, poets chanted the discoveries and the glory of their fellow-citizen, a public fête was organised in his honour, and everyone wanted to be the proud possessor of a Venetian glass. The infection spread even to Paris—a long way off in those days—where, at the moment, everything Italian was fashionable, owing to the recent marriage of Henry IV with Marie de Medici. On discovering the four satellites of Jupiter, Galileo named them Medicean Stars in honour of the Grand Duke and his three brothers. Now, forsooth, he must find a place in the heavens for the French King also. Writing to Galileo on April 20th, 1610, a high official in Paris says:—"In case you discover any other fine star, call it by the name of the great star of France—the most brilliant of all this earth—and please call it rather by his proper



Same as last with slight differences.

(See page 105).

PLATE XXVI.



Medallion by Josiah Wedgwood in the Museum,
Liverpool.
(See page 110).



Medallion by James Tassie. From one in the
Author's possession.
(See page 112).

name, Henri, than by the family name, Bourbon. Thus, you will be doing a just and proper thing, and, at the same time, you will bring renown and riches to yourself and family. Therefore, pray discover as soon as possible some heavenly body, to which his Majesty's name may be fitly given, and let me have the very earliest advice thereof."¹

It is Galileo's first exhibition of the telescope that we find depicted, rather grotesquely, in an old Dutch print, which forms the frontispiece to Vol. IV. of "*Le Spectacle de la Nature*," Aja, Neaulme, 1746. The print is inscribed:—

La Lunette de Hollande
Apliquée a l'Astronomie
En 1609.

The scene is laid on the top of the campanile in Venice; the time is night, as indicated by the starry heavens and several flaming torches. Surrounded by senators and nobles, all in the dress of the period, the Doge is seated, and is eagerly following Galileo's explication of an astronomical design on a large scroll which he is holding up. In the background and projecting over the parapet are two telescopes, fixed on tripods, through which two of the company are peering.

This will be a convenient place for recording several pictures of which the telescope is the *motif*, and of which further particulars are greatly desired. Our scant information can be best put in tabular form.

¹ Letter from Galileo to Vincenzio Giugni, 25 June, 1610. Alas! for the vanity of human wishes, Henry IV was assassinated a few days later, 14 May, 1610, while riding through the streets of Paris.

Table of Paintings of which particulars are desired.

No.	NATURE.	ARTIST.	SUBJECT.	REMARKS.
1	Painting	Pollastrini	Galileo showing the Medicean Stars	Now known as Jupiter's Satellites.
2	Fresco	...	Galileo presenting telescope to the Doge of Venice	In portico of the Ducal Palace. Scene laid on top of the Campanile, which is incorrect historically.
3	Painting	...	Same Subject as No. 2	Scene laid correctly in Sala del Collegio of the Ducal Palace.
4	Painting	L. Detouche	Same Subject as No. 2	Shown in Paris Salon, 1850.
5	Painting	...	Same Subject as No. 2	In Library of Univerity, Pisa.
6	Pastel	Mateschal de Metz	Galileo Star-gazing	Scene laid in Arcetri. Shown in Paris Salon, 1855.
7	Painting	Gosse dis. Jazet inc.	Galileo expounding the heavens	Scene laid in Florence.
8	Aquarelle	Silvestri	Galileo observing the planets	Scene laid in Courtyard of Galileo's Villa, Il Gioiello.
9	Aquarelle	Silvestri	Galileo observing the planets	Scene laid on top of Torre del Gallo in Arcetri.

XVII.

GALILEO IN ELYSIUM

BY BARRY, 1783.

James Barry was born in Cork in 1741. He was an Irishman to the finger ends, a genius, mercurial, quarrelsome yet lovable, and improvident to a degree. From his seventeenth year he painted in oils, and in his twenty-first year produced *St. Patrick baptising the King of Cashel*, which was exhibited in Dublin, and brought him into notoriety. Edmund Burke, then commencing his career, was Barry's first patron, and arranged to send him to Italy, to nourish and mature his genius by a study of the Old Masters. Towards the end of 1765, he went to Rome, where, owing to his fiery disposition, he was in a chronic state of logger-heads with most of his surroundings.¹ After six years' hard work in Rome he returned to England, and in 1771 showed his first picture, *Adam and Eve*, at the Royal Academy.

About 1777, he proposed to the Society of Encouragement of Arts, Manufactures, and Commerce (now the Royal Society of Arts), to adorn their Great Room at the Adelphi with a series of paintings by his own hand, on the condition of being allowed to choose the subjects, and of being provided with canvas, paints, and models. He calculated that the work would take two years of constant labour (actually it took six), during which time he must support himself by additional toil in hours stolen from sleep. But this did not deter him, and, with sixteen shillings in hand, he began his great undertaking.

This is a stupendous performance, and occupies nearly the

¹ Poor Barry! to use the words which Burke addressed to him in a beautiful letter of advice, he "snarled and scuffled" to the end of his life, and died in neglect and poverty on 22 February, 1806. His body lies in St. Paul's beside that of Sir Joshua Reynolds. But how far apart their lives!

whole of the wall space, beginning ten feet from the floor. It consists of six *tableaux* illustrative of the progress of civilisation, (1) Orpheus subduing the Tracians, emblematic of the savage state, full of imperfections, inconvenience, and misery, (2) a Greek Harvest-home, or the Age of Agriculture, (3) Victors of Olimpia, or the Reign of Law, Literature, Science, and the Arts, (4) Triumph of the Thames, or the modern triumphs of navigation, (5) Distribution of Prizes by the Society, or the Age of Manufactures and Commerce, and (6) Elysium, or the happiness of the great and good in a future state.

The Elysium canvas occupies the whole of the South wall, and, like the Victors of Olimpia on the opposite wall, is forty-two feet long. It is filled with figures of great men of all nations, copied where possible from actual portraits. The small portion which concerns us just now is the bottom corner on our left-hand side. The lowest figure standing alone is Roger Bacon, above are Thales, Descartes, and Archimedes, and above these Francis Bacon, Copernicus, Galileo, and Sir Isaac Newton. 'The Galileo is a poor likeness but recognisable. He carries a telescope on the right shoulder *à la blunderbuss*.' Mrs. Arundell Esdaile, who has made a study of these paintings, tells us that Barry took great pains to portray his figures as accurately as possible, and, with this object, issued an appeal to the "Nobility and Gentry" for portraits of great men of all nations. Where there are hundreds of such great men depicted (in the Elysium alone there are over one hundred), this appeal could have but a limited response; still, as Mrs. Esdaile says, the fact should be noted, as showing the artist's zeal for accuracy.

¹ Note on the Pictures by James Barry in the Great Room of the Society of Arts, by H. Trueman Wood, Secretary, London, 1880.

XVIII.

GALILEO AS COLUMBUS

BY CIPRIANI, 1815.

This is a curious instance of a picture losing its identity, or of misnomer, of which we have met with many examples in the course of our researches. Giovanni Batista Cipriani was born in Pistoia, near Florence, in 1727. He first studied under an Englishman named Hugford, then residing in Florence, and afterwards spent three years in Rome. In 1755 he accompanied Sir W. Chambers to London, where he passed the rest of his life. He was a foundation member of the Royal Academy, for which he designed the Diploma, and where his drawings were admired for their grace and softness. Many of his works are familiar to us in engravings by the equally celebrated Bartolozzi. He died in Hammersmith about 1790.

About twenty-five years later, his picture of Galileo was engraved and published as Columbus! In 1912 I "picked up" a copy in Liverpool, inscribed Cipriani pinxt. J. Godby sculp.

COLUMBUS.

Published and sold June 4th, 1815, by Edwd. Orme, Bond Street, corner of Brook Street, London.

It was sold as "a genuine Columbus, and rare in this form!" The figure is full length, and holds a telescope in the right hand, the left resting on a large celestial globe. The pose and the massiveness of the work would suggest that it was designed for a statue. The head, which is small in comparison with the very portly body, was done, apparently, from one of Sustermans' portraits. The telescope and celestial globe are additional proof that Galileo is indicated, certainly not Columbus, who died 117

years before the telescope was invented.¹ Who is responsible for this blunder? We can hardly accuse Cipriani, a fellow countryman of Galileo, who, surely, would know of the Sustermans' portraits in Florence. The blame must rest with Godby, the engraver, or with Orme, the publisher—more likely the latter. Yet, there is a still more curious case of blundering in Cambridge, in which Cipriani himself must take all the blame. An old Cambridge Guide, describing the library of Trinity College, says:

“The south end is terminated by folding doors, opening to a balcony; over which is a window of painted glass for the execution of which £500 was bequeathed by Dr. Robert Smith, formerly Master. The window was painted by Mr. Peckitt of York from a design of Cipriani. The subject represents the presentation of Sir Isaac Newton to his Majesty George III, who is seated under a canopy, with a laurel chaplet in his hand, and attended by the British Minerva, who is, apparently, advising him to reward merit in the person of the great Philosopher. Below the throne is the Lord Chancellor Bacon, in his robes, with a pen and book, as if preparing to register the reward about to be bestowed on Sir Isaac. The original drawing, which cost 100 guineas, is preserved in the library. Not only, however, is the glare of the colouring out of keeping with this exquisitely beautiful edifice, but the incongruity of the design itself is as absurd as could well be imagined; the circumstance of the Artist's being a foreigner may, however, in some degree plead his excuse for that ignorance of English history, which is displayed by the introduction of three characters who never were contemporaries into one picture.”²

¹ In the British Museum (Print Room) there are two copies of this engraving, one in the Cipriani portfolio, where the face and hands are tinted; the other in the Columbus portfolio.

² “The Cambridge Guide,” etc., New Edition, Cambridge, 1830, p. 182.

XIX.

GALILÉE ÉTUDIANT LE MOUVEMENT DE LA TERRE
BY DELAROCHE, 1834.

Paul Delaroche was one of the greatest of modern French painters. Born in Paris in 1797, he began with landscapes, but after a short time applied himself exclusively to historical pieces under Baron Gros, in which he held from the first a middle place between the Classical and Romantic Schools, and, hence, he was called "The Girondin of Art." All his subjects are sober, and many of them full of sadness — thus reflecting his own predominant disposition. In his last years he confined himself, chiefly, to religious pieces. "After a life of study and incessant work, and, latterly, of much sorrow borne with great faith," he died in Paris in 1856, a member of the Institute, and of the Legion of Honour.

In the "Grand Dictionnaire Larousse," *verbo* Delaroche, the picture is thus described:—"Ce petit tableau qui a été peint en 1834, et fut exposé au Salon de la même année, est, peut-être, le chef-d'œuvre de Delaroche. Il excita des applaudissements universels. Il représente Galilée, entouré des livres et d'instruments astronomiques, étudiant dans son cabinet, un compas à la main, le mouvement de la terre, le dos tourné contre une fenêtre, dont les rideaux rouges laissent passer un rayon du soleil. Ce charmant tableau de genre fut également trouvé d'un effet délicieux de dessin et de couleur. L'ensemble ravissant, harmonieux, étonnamment soigné, laissait voir, néanmoins, une patiente finesse dans les moindres détails. La manière de Delaroche était tout à coup changée, et rappelait celle des vieux maîtres flamands. La presse et le public furent unanimes à trouver cela presque beau, bien que cela fut trop joli."

XX.

GALILEO ON THE LEANING TOWER OF PISA

BY ROBERT-FLEURY, 1847.

In the "Nouveau Dictionnaire Larousse," *verbo* Galilée, there is a brief mention of another picture by J. N. Robert-Fleury, of which we have been unable to find any other trace. After referring to the large canvas of Galileo before the Inquisition (p. 66 supra), the writer of the article goes on:—"In another *tableau* Robert-Fleury has represented Galileo at night seated at the top of the Tower of Pisa, engaged in astronomical observations."

It is regrettable that such interesting pictures should disappear and leave no sign of their existence anywhere. However, as a matter of fact Galileo never used the tower for astronomical purposes. Indeed, in those early Pisan days, he would know little or nothing of astronomy, his first open connection with the science dating from 1604,¹ the year in which a new star of great splendour appeared in the constellation Serpentarius. Of this he was an early and careful observer, and it seems to have suggested, as the subject of his winter course in Padua, the theory of the planets. This gave his auditors an opportunity of seeking his views on the new prodigy, whose sudden appearance had given rise to bewildering ideas, and terrible forebodings on the part of the astrologers. In compliance with the general request for information, he, early in January, 1605, delivered three special lectures on the subject in the Aula Magna of the University. In the opening sentences (the only part preserved to us) he took occasion to rebuke his hearers for their general insensibility to the

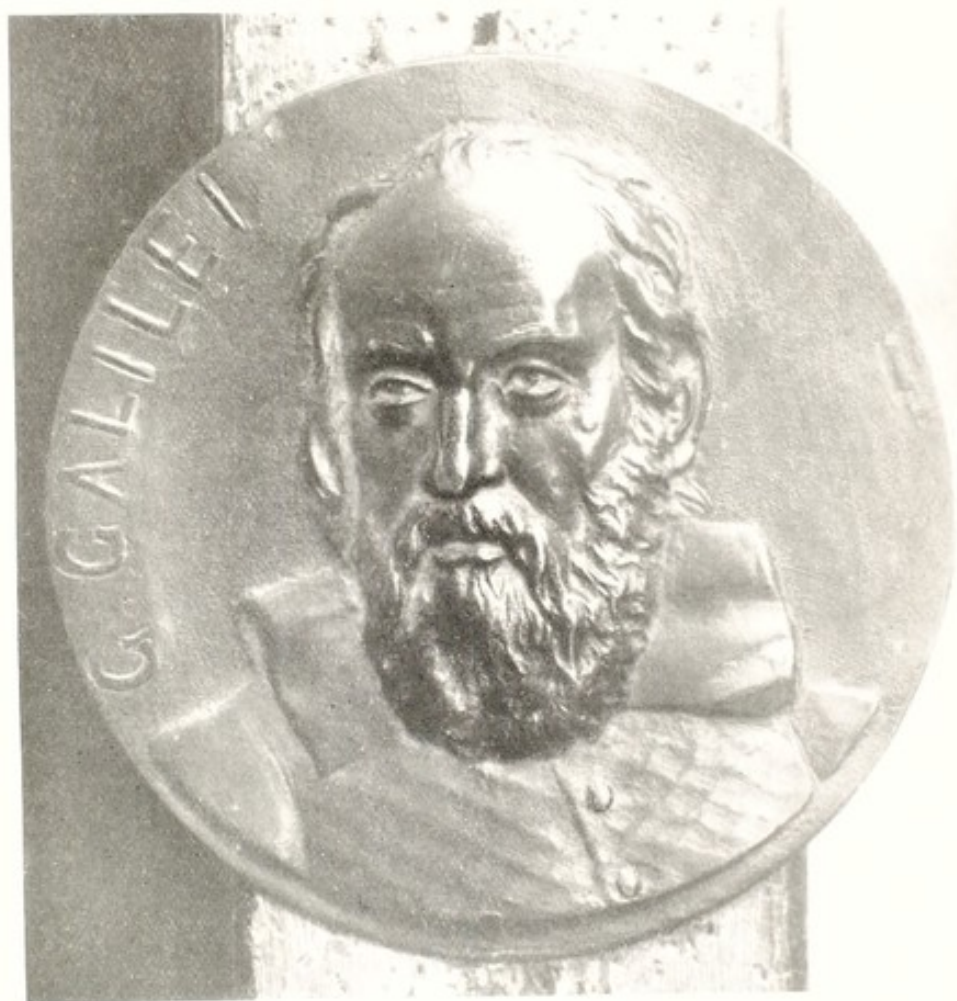
¹ Privately, he had been an adherent of the Copernican theory of the solar system for many years before this, but, in deference to public opinion, he continued to teach the Ptolemaic doctrine in his classes. See his (first) letter to Kepler, dated August 4th, 1597.

PLATE XXVII.



Medallion by A. Guarducci in Façade of the Duomo, Florence.
From a photograph by Alinari.
(See page 114).

PLATE XXVIII.



Medallion by Pietro Rossi on occasion of Tercentenary of
Galileo's Professorship in Padua.

(See page 117).

wonders of nature daily exposed to their view, and in no way less admirable than this new star which had brought them in crowds to his lecture room.

While, then, Robert-Fleury's picture is untrue historically, it serves to remind us of a real incident in Galileo's career, which links his name indissolubly to the famous tower, and which we relate in another connection on page 120 *infra*.

XXI.

GALILEO IN HOUSE DECORATION

BY SAMOGGIA, 1860.

Favaro has a note of one such case in which he says:—
“About half a century ago, the Marquis Luigi Pizzardi of Bologna commissioned Samoggia to decorate a grand saloon in his palace, and adorn it with panels containing portraits of Galileo, Dante, Macchiavelli, and other great Italians. The palace has passed since into other hands, but the pictures were removed beforehand, and now adorn the ante-chamber of the Marquis Carlo, his son. Galileo is shown on a balcony observing the stars through a telescope” (“Atti Del Reale Istituto Veneto,” Vol. 73).

XXII.

GALILEO AND THE STATES-GENERAL OF HOLLAND

BY MACCIÒ, 1861.

At the Esposizione Italiana in Florence in 1861, a fine painting by Demostene Macciò of Pistoia was exhibited. It pictures Galileo refusing the Collar of Gold offered by the States-General of Holland, in gratitude for his proposed method of finding the

longitude at sea. The picture is at present in the possession of Signor Antoniadis of Alexandria, Egypt.

As far back as 1612 Galileo had drawn up tables showing the positions of Jupiter's satellites for several months in advance, and these had been found to agree fairly well with subsequent observations of their actual positions. Since that time he had continued his calculations with the desire of bringing the tables to as high a state of accuracy as possible, thus providing, as he hoped, a new and effective method of finding the longitude at sea. This was the point to which the inquiries of the States-General were directed. Was the method, in fact, practical and reliable *at sea*? On November 11th, 1636, they appointed four Commissioners to communicate with Galileo, and to report upon the points on which they required information. Meanwhile, they voted him a golden chain as a mark of their esteem, and assured him that, in case his method proved successful, he would have no cause to complain of their generosity. After much delay, caused partly by the secret and roundabout way the correspondence had to be carried on, and partly to the gradual failing of Galileo's sight, Hortensius, one of the Commission, was deputed, early in June, 1638, to set out for Florence to confer with Galileo in person; but the journey was put off at the last moment. "As ill-luck would have it," says Galileo, "the Holy Office came to know of my negotiations with the States-General, which may do me great harm, I am, therefore, obliged to you for having induced Signor Hortensius to give up his journey, thereby averting from me some calamity" (Letter to Diodati, August 14th, 1638).

Some months later, the brothers Ebers, Dutch merchants trading in Florence, were commissioned to deliver the golden chain, and a letter from the States-General. On arriving at the house in Via della Costa (where Galileo was staying temporarily), they found the old man in bed, ailing, and totally blind. He

asked them to read the letter aloud, and to hand him the box containing the chain. Feeling it with his fingers, he expressed in a few measured words his thanks for their courtesy, and to the States his gratitude for this signal mark of favour; the letter he would keep, but he begged them to take back the chain, as he did not think it proper to retain it, seeing that, owing to his blindness and increasing infirmities, the negotiations must be suspended.

In a report (1714) on this subject, Newton says:—"Galileo's method, like several others, is true in theory, but difficult to execute. By reason of the length of telescope requisite to observe the satellites, and the motion of a ship at sea, their eclipses cannot yet be observed." About the same time, Bradley was making an exhaustive study of the movements of these satellites, and, in 1726, was induced to undertake a determination (in accordance with Galileo's method) of the longitudes of Lisbon and New York. The results were said to be remarkably accurate.

XXIII.

GALILEO WITH A YOUNG SCHOLAR,

TWO PICTURES BY CANTAGALLI AND JOZZI, 1870.

In 1870, Father Everardo Micheli, then professor in Siena (afterwards in Padua), proposed to the students of the Accademia di Belle Arti as subject for a picture "Galileo, blind, in Gioiello, instructing a scholar in his last work on motion."

The first prize was awarded to Cesare Cantagalli, whose picture is now in the Istituto di Belle Arti, Siena. The second prize fell to Carlo Jozzi, now Teacher of Design in the Art School

of Poggibonsi, his native place. Jozzi's picture also has found a home in the Palazzo Ricasoli in Florence.

For the tercentenary of Galileo's appointment as professor in Padua, December 7th, 1592, Cantagalli executed an admirable engraving after Sustermans' (1635) portrait. This was reproduced on the front page of "*L'Illustrazione Italiana*" of December 18th, 1892, and was greatly praised for its fidelity to the original.

XXIV.

GALILEO IN THE ASTRONOMERS' PARADISE
BY ANDRIOLLI, 1872.

This fine allegorical painting was done by Andriolli, and was exhibited in Warsaw in 1872. It represents Copernicus, placing the left hand on his famous book, "*De Revolutionibus Orbium Coelestium*," Nuremberg, 1543, and the whole attitude suggests that he is expounding his system of the world to the assembled astronomers, who are of all ages and nations. Galileo occupies a prominent position, and is shown holding in his hand his "*Dialogo Dei Massimi Sistemi*." His left hand rests on a telescope. The other figures are an Egyptian astronomer, said to represent Moses, perhaps because he is our great authority for the first ordering of the firmament, as told in the Bible; or it may be Joshua who knew so much about the Moon's mechanism that he was able to stop it on a memorable occasion¹; or it may be Job, who alludes to some astronomical problems in his Chapter IX, one of which—*Qui commovet terram de loco suo*—was adduced in support of the Copernican theory by Diego di Zuniga, professor

¹ Luther is positive as to Joshua:—"This upstart astrologer (Copernicus), this fool, who wants to reverse the entire science of astronomy! Sacred Scripture tells us that Joshua commanded the sun to stand still—not the earth."

in Salamanca, in his "Commentary on Job," 1584. After (shall we say) Job comes an Indian astronomer, then a Chinese, Czau-Kong, then John Sniadeki, Helvetius, Kepler, the Law-giver of the planets, Newton, Bradley, Laplace, Ptolemy, Hipparchus, and last of all, Albert Brudzewski, professor of mathematics at Cracow University, when Copernicus took his Doctor's degree in Arts and Medicine about 1495. It was a chance attendance at one of Brudzewski's lectures that turned Copernicus from medicine to astronomy, which thenceforth became the all-absorbing study of his life.

An engraving by Arthur Wolynski has been published by Messrs. Styfl and Holewinski, Warsaw.

XXV.

GALILEO E MILTON IN TORRE DEL GALLO

BY ANNIBALE GATTI, *circa* 1877.

This painting, apart from its great merit as a work of art, beats the record, I think, for replicas, i.e. copies by the artist himself. A short time before Gatti's death in 1893, Professor Favaro was privileged to visit his studio in Florence, and found him at work on a new edition, the fourteenth or fifteenth (the artist could not be certain), and hardly two of them alike, each copy being made to suit the taste of the customer. In these circumstances it is necessary to say that our remarks refer to the original, a full account of which was published by Giuseppe Palagi, "Milton E Galileo," Firenze, 1877.

In 1868, was published in Florence "Versi Di Giacomo Zanella," containing (pp. 1-38) his fine poem Milton e Galileo. This was an inspiration to young Gatti to transfer to canvas the

grand conceptions of the poet—li poeti depingono con le parole, li pittori parlano con l'opere. While working at a fresco in a villa near Leghorn, he received a visit from Mr. James Dougherty, a rich American travelling in Italy. The visitor introduced himself by saying he was so struck by a small picture entitled *God and Liberty*, which he chanced to see in a shop window in Florence, that he made inquiries as to the name and address of the painter, etc. Before parting, Mr. Dougherty proposed that Gatti should do a painting of a kind suitable for his collection of pictures, representing salient traits in the lives of men famous in mechanics, astronomy, and the arts. He intended these pictures for a School of Engineering, which he was about to establish in Philadelphia, "so that all, teachers as well as pupils, may be inspired and encouraged by great examples." With Zanella's verses ever in mind, Gatti did not hesitate to suggest a painting of Milton visiting Galileo, and Mr. Dougherty at once closed with the offer. The picture, 50 in. by 39 in., was finished about 1876-7, and has been reproduced in Palagi's little book, and, twenty years later, in "*L'Illustrazione Italiana*" of August 2nd, 1896.

Finding, doubtless, the Villa Gioiello (Galileo's last home in Arcetri) unsuitable, Gatti took the artistic license of transferring the scene to the neighbouring Torre del Gallo. There, in the top chamber of the old tower, are seen some rude wooden steps leading, through a half-open door, to the flat roof. On the landing are grouped a few of Galileo's immediate disciples (as Torricelli and Viviani),¹ all intent on telescopic observations of the moon, whose beams flood the landing stage. In the chamber below Galileo is seated by a table on which lie books and a map (or diagram) held open by a pair of compasses. The light is

¹ This is another artistic license. Viviani did not join Galileo till the summer of 1639; and Torricelli was with him for a few months only before his death in January, 1642.

supplied by a table lamp which is partly concealed by a celestial sphere. A telescope and a loadstone are on the table close by. Galileo is discussing with his son, Vincenzo, the observations reported by those on the landing, when an old woman, lamp in hand, appears at the entrance door, and announces Milton. The disciples, not observing the newcomer, continue their work. The son and his wife rise to welcome the visitor, and Galileo, hearing the salutation in an unknown voice, turns his head and throws forward a trembling hand, which is reverently seized by Il Giovane Milton!

Of the fourteen or fifteen copies, or variants, Palagi accounts for eight thus: In the possession of La Baronessa Favard, one copy; Mrs. Mogg, England, one copy; Colonel Dalzel, England, one copy; Mr. G. Fischer, America, one copy; Mr. Perkins-Bass, Chicago, one copy; Messrs. Costa & Conti, Art Dealers, Florence, one copy; Mr. Robert McTear, Glasgow, two copies.¹

A ninth copy, differing greatly from the original, is now in the Galleria Pisani, Piazza Manin, Florence, a fine collection of works by modern Italian artists. It shows us (Plate XXI) a rude chamber opening on to a covered balcony through a wide arch. Just inside the archway a telescope is mounted, through which Milton is observing the full moon, not seen, but which floods the balcony with light. Galileo is standing by the telescope, telling Milton what to look for. In the background are Vincenzo Galilei and young Viviani; and seated by a table in the centre is Vincenzo's wife. At the left side of the picture the old servant is seen leaving the chamber; she pauses and looks back curiously, as if wondering what it all means.

¹ Some few years before this, Mr. McTear commissioned Gatti to paint a picture of Sir Walter Scott, "inspecting the tombs of Michael Angelo and Dante in Santa Croce, Florence" (circa May, 1832). It has been reproduced in *The Graphic* (Scott Centenary No.), 15 August, 1871.

These pictures are noteworthy for the skill with which the artist has managed his three lights—of the full moon, the table lamp, and the servant's hand lamp.

XXVI.

GALILEO E I SUOI SCOLARI IN ARCETRI
BY N. BARABINO, 1880.

"Of all the studies of Galileo," I quote my friend Favaro, "the most admired and, I will say, the most deservedly popular is Galileo in Arcetri by Niccolò Barabino, which was first exhibited at the Turin Exposition of 1880, and is now preserved in the Palazzo Orsini in Genoa. Galileo is shown in the last days of his life, ill in bed, and demonstrating some geometrical problem to Torricelli (in front), Viviani (writing), and his son Vincenzio (listening).¹ The attitudes of the three young men, intent on the words of the Master, contrasted with his own hieratic calmness is very notable, and, however much art critics may find fault with it, the composition is, undoubtedly, the best work on Galileian subjects by which Italian Art has honoured itself" ("Atti Del Reale Istituto Veneto," vol. 72).

Viviani tells us that in those last days, and amid much

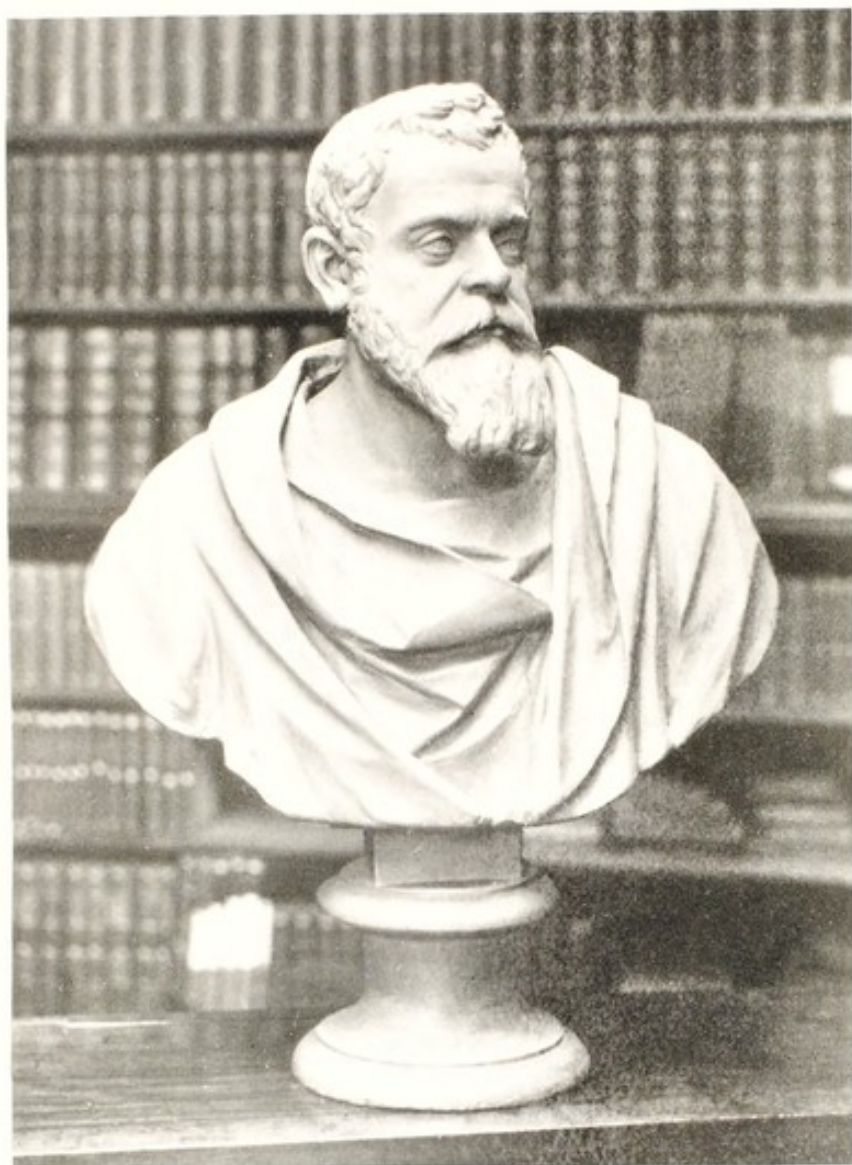
¹ Torricelli was with Galileo for the last few months, and, on the latter's death in 1642, succeeded him as First Mathematician to the Grand Duke. He died in 1647, and to his portrait prefixed to his Collected Works was appended the following clever conceit:

Evangelista Torricellius
Anagramma
En Virescit Galilaeus Alter.

Viviani, aged eighteen, joined Galileo in 1639, and remained to the end—his last well-beloved disciple. He died in 1703, a distinguished member of the Royal Society of London.

Vincenzio was a rolling stone, a grief and a disappointment to his father. He died in 1649.

PLATE XXIX.



Bust in Plaster by Caccini in the Master's Lodge,
Trinity College, Cambridge.
(See page 124).

PLATE XXX.



Bust in bronze by Pietro Tacca in possession of Mr. Maurice Rosenheim.
(See page 126).

suffering, the Master's mind was ever occupied with mechanical and mathematical problems. Thus, one day Viviani drew his attention to a flaw in his statement on the falling of a body down an inclined plane. That night he lay sleepless in bed, but found the necessary correction. He had the idea of preparing two other dialogues, to be added to the four already published in his great work "*Intorno A Due Nuove Scienze*," Leyden, 1638. In the first, he would give new reflections and demonstrations on passages in the first four dialogues, and the solution of many problems in Aristotle's "*Physics*." In the second, he proposed to open up an entirely new science—the wonderful force of percussion—which he claimed to have discovered, and which, he said, exceeded by a long way his previous speculations. These were left unfinished, but were put together afterwards by Viviani, and added as 5th and 6th Dialogues to all later editions.

REPRODUCTIONS.

A fine reproduction of this inspiring picture has been published jointly by A. Fusetti, Milano, and P. A. Jacquier, Genova, inscribed: Fot. Svicher—Fotocalcografia Fusetti.

XXVII.

MILTON E GALILEO IN ARCETRI
BY TITO LESSI, 1893.

This is a smaller and less ambitious production than Gatti's on the same subject, but it is more true to reality, and also to history, in that the scene is laid in Galileo's last home in Arcetri, and, probably, in the very chamber in which the meeting took place in 1638.

Tito Lessi was born in Florence in 1850, and made his first

studies in Art in the Accademia di Belle Arti in that city. In 1881, he settled in Paris, and exhibited many of his works in the Salon Sedelmeyer, in competition with those of the celebrated Meissonier, and, after that artist's death in 1891, Lessi alone held the field as an exponent of Italian art in Paris. After many years' sojourn in the French Capital, he returned to Florence, and became professor in his old academy. He died in that capacity some 12—14 years ago.

His picture of Galileo and Milton was finished in 1893, and at once became popular "for its exquisite finish of design, the correctness of atmosphere, the elegant modelling, and the perfect adherence to truth." In the centre is a large celestial globe, beside which Galileo, rising from his seat and with outstretched hands, is addressing Milton who is seated in rapt attention on the opposite side. Beside him sits Galileo's nephew, Alberto, a musician at the Court of Munich, then on a visit to his uncle. Behind the globe is seen Vincenzo, Galileo's son, holding a large open volume, and further back by the window stands Frate Francesco Michelini di San Giuseppe, Galileo's devoted friend and amanuensis. The attitudes of the listeners are fine, especially that of Milton, who is intently regarding the blind speaker. There are a few details which give a sense of reality to the scene, such as Milton's hat, stick, and gloves. Truly, this is a very pleasing composition.

REPRODUCTIONS.

An engraving after it by A. Mathey-Doret, 14 in. by 17½ in., was published by the Maison Sedelmeyer, Paris, November 1st, 1895, and was reproduced in "*Italiana Illustrata*" for 1896.

XXVIII.

PAINTINGS OF WHICH PARTICULARS ARE DESIRED.

There remain a few paintings of which our information is so scant that we must relegate them to a final paragraph, in the hope that some reader will be able to supply particulars. They are as follows :—

- (1) A painting showing Galileo in the Cathedral of Pisa, of which Favaro has seen a print.
- (2) Engraving published in 1823, and inscribed *Deveria dis. Burdet inc.* An episode in the life of Galileo.
- (3) Same subject as No. (2), inscribed *J. Beaune dis.* Shown in Paris Salon, 1853.
- (4) A painting by Desanctis in the collection of Prince Giovanelli, Venice.
- (5) A portrait of Galileo, Fresco in vaulted ceiling of Scuola d'Applicazione per gli Ingegneri, S. Pietro in Vincoli, Rome.

PART III.

MEDALS AND MEDALLIONS.

I.

MEDAL OF GALILEO
IN POSSESSION OF PROF. FAVARO.

Favaro has a note of a medal in his collection which he thinks is the earliest of all, and of which, strange to say, he has been unable to find any mention. It is in bronze, heavily gilt, measures 95 mm. in diameter, and shows a bust in high relief, inscribed Galileo Galilei. As to what may be on the reverse side he cannot say, as the medal is firmly cemented in an artistic design, not unlike the crest or ornamental cornice one sees occasionally on old picture frames. It is carved in wood, triangular in form, and shows some mathematical and astronomical instruments. To remove the medal for examination would entail, perhaps irreparable, damage to its encasement, and this Favaro, though tempted, has refrained from doing ("Atti Del Reale Istituto Veneto," Vol. 72.)

II.

MEDALS (6) OF GALILEO
COLLECTED BY NELLI, 1793.

Nelli, in his "Vita E Commercio Letterario Di Galileo" (p. 868) reproduces six medals, of which I quote his description, with Favaro's emendations in square brackets.

1. In the first, obverse, is the portrait of our philosopher, aged about forty-five years, and inscribed *Galilaeus de Galilaeis Flor.* On the reverse is a telescope. [Here it will be noticed that the reverses are not alike. In one copy (see Illustrations) the telescope is mounted on a tripod; in the other it is shown closed as a cylindrical tube, crossed with an anchor.]

2. In the second medal the portrait of our philosopher is inscribed *Galilaeus de Galileis Florentinus.* Reverse has a portrait of Archimedes. [This is reproduced in "*Museum Mazzuchellianum*," and there is a copy in the *Museo Galileiano del Conte Galletti, Torre del Gallo.* Bronze, and measures 58 mm. diameter.]

3. Effigy, with same inscription as last; reverse *Famae Eternae.* [Nelli supposes that these three medals were struck in Padua before Galileo resigned his professorship (1610) to return to Florence—a supposition likely enough, since the portraits show a man not exceeding forty years of age.]

4. This, inscribed *Galileus de Galilei Mathematicus*, differs from the last three, shows a much older man, and, probably, was cast after Galileo's death. The reverse is blank.

5. This, the most accurate, was cast in bronze for Viviani by the celebrated sculptor, Gio. Batista Foggini. It shows our philosopher in middle age, with a border inscribed

Galileus Lynceus.

[On the reverse is seen a tower from which heavy bodies are falling; a gun throwing a ball which describes a parabolic curve; a heavy beam supported at the ends and fractured in the middle; a telescope and compass or divider; and a slender rod fixed at both ends suggestive of the catenary curve. In the heavens are Jupiter and his satellites; the moon in quarter; a comet; and Venus, in phase, revolving round the sun. A ship is shown in full sail,

suggestive of Galileo's method for finding longitudes at sea.
Inscriptions, above,

Naturamque Novat.

below,

Memoriae Optimi / Praeceptoris Vinc. / Vivianus.

This medal, 85 mm. diameter, has been reproduced in "Museum Mazzuchellianum" after the copy in the Museo Pisani da Jacopo Morelli; also in Venturi's "Memorie E Lettere . . . Di Galileo"].

6. Finally, Antonio Selvi, a pupil of Soldani, the sculptor, and under the direction of Simone Peruzzi, cast a medal which shows Galileo with a surrounding inscription *Galileus Galilei Patr. Flor. Mathe^m. Celes.* On the reverse are two female figures, one, divider in hand, is Geometry, the other Astronomy. A telescope beside the latter is pointing to Jupiter and his four satellites. [This also is reproduced in "Museum Mazzuchellianum."]

III.

MEDALS (5) OF GALILEO

COLLECTED BY FAVARO, 1912.

To the six medals recorded by Nelli, Favaro has added five others which have been struck since Nelli's time.¹

1. Bronze, 41 mm. diameter; obverse, bust of Galileo to right, inscribed *Galilaeus Galilaei*. Gayrard F. The inscription on the reverse is:—

"Natus Pisis in Italia An. MD. LXIV. Obiit. An. M.DCXLII.
Series Numismatica Universalis Virorum Illustrum,
M.DCCC. XVIII. Durand Edidit."

¹ Atti del Reale Istituto Veneto, vol. 72.

Copies are in the possession of the Museo Bottacin, Padua; Prof. Favaro; the Royal Society, London; and G. H. Gabb, Collector, London.

2. Copper, 40 mm. diameter; obverse, bust of Galileo to left, inscribed *Galileus Galilei*. Nic. Cerbara F. Reverse (between laurel leaves), *Conditori Disciplinae ad Leges Motus et Astror. Certo Cognocendas*. Above are stars in the firmament.

Copies are preserved in the Museo Bottacin, Padua, and the Museo Galileiano, Torre del Gallo, Florence.

3. Copper, 55 mm. diameter; obverse, bust to left, under the shoulder, P. Cinganelli, and below, a telescope. Reverse:—

A Onore Di Galileo
Pisa
Memore Del Primo Concesso
Dei Naturalisti
Italiani
Auspice Leopoldo II
Ottobre MDCCCXXXIX.

Under this inscription are the Cathedral, the Leaning Tower, and the Baptistery of Pisa, with engraver's name, Nideröst F.

There is a copy in the Museo Bottacin, Padua.

4. Medal in silver-gilt, 55 mm. diameter; obverse, bust to left, inscribed *Galileo Galilei*, P. Cinganelli F., and, lower down, a telescope. Reverse as follows:—

S.P.Q.R.
Academia
Pristino Decoris Restituta
Omnibusque disciplinis Aperta
III Non. Decem. MDCCCLIX.
Vict. Emm. Sabaud. II. P.F.A.
Ital. Med. Rege Electo.

Below : Arms of Pisa, between an oak and a palm branch.

Copies are in the possession of Museo Bottacin and Mr. Gabb.

5. Bronze, 55 m. diameter; bust to left, inscribed Galileo Galilei, P. Cinganelli F., and below, a telescope. The reverse is as follows :—

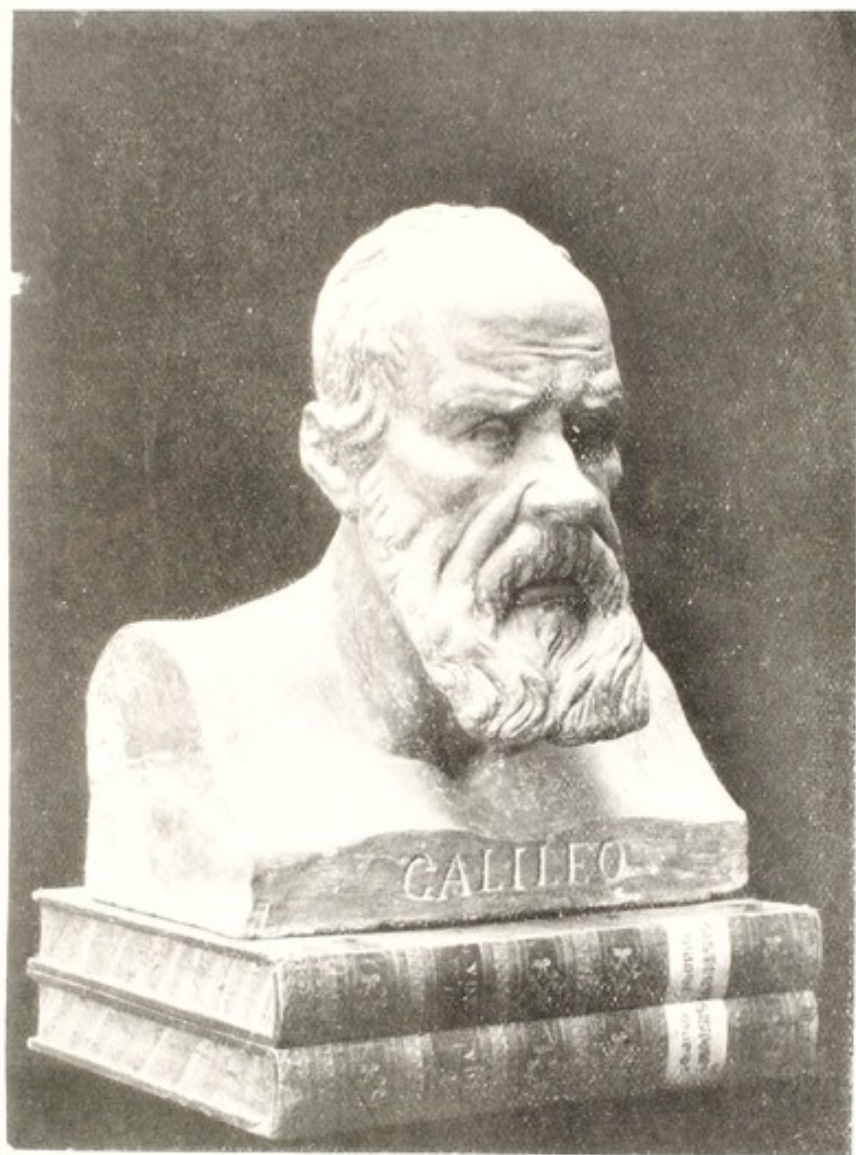
Pisa
Che Lo Vide Nascere
Ne Celebro
Il Trecentesimo Natalizio
A XVIII Febbraio
M.D.CCC.L.XIV.

Professor Favaro had a copy of this medal; and another copy (in gold) was presented by the University of Pisa to the University of Padua on the occasion of its celebration of the tercentenary of Galileo's professorship in Padua, December 7th, 1892. Favaro was the moving spirit at this grand function, and delivered an oration to an assemblage of scientists from all parts of the world. The conference concluded with the unveiling of a commemorative tablet as follows :—

Anno Trecentesimo A Die Qvo
Galilaevs Galilaeivs
In Hac Ipsa Avla Docendi Initivm Fecit
Vniversitas Patavina
Humberto I Rege Favente
Saeculares Ferias Sollemniter Agens
Tanti Diei Ac Decoris Memoriam
Lapide Posteritati Traditam Volvit
VII. Id. Dec. MDCCCXCII.¹

¹ See more p. 117 *infra*.

PLATE XXXI.



Bust in Plaster—Artist unknown—in Musco Galileiano, Torre del Gallo.
(See page 127).

IV.

MEDALS OF GALILEO IN THE BRITISH MUSEUM.

(Communicated.)

1. Obverse, Galileus de Galileis Florentinus. Bust draped, L. Reverse, Archimedes. Otherwise blank. 2.35 inches, Æ.

2. Obverse, Galileo Galilei. Bust, L. Below, telescope. Reverse, A Onore Di Galileo Pisa Memore Per Primo Concesso Dei Naturalisti Italiani Auspice Leopoldo II. Ottobre MDCCCXXXIX. A view of Pisa with its leaning tower. 2.15 inches, AR. Obverse, P. Cinganelli. Reverse, G. Nidcroest.

3. Obverse, similar to 2. Reverse, Pisa Che Lo Vide Nascere Ne Celebro Il Trecentesimo Natalizio A XVIII Febbraio M.D.CCC.LXIV. 2.15 inches, Æ. Obverse signed P. Cinganelli.

4. Obverse, Galileus Lynceus. Bust R, below bust, Aetat L. Reverse, Naturamque Novat. A clear sky with half moon, stars, etc. A lighthouse below in the sea. In foreground a gun discharging a rocket, a telescope, etc. Memoriae Optimi Praeceptoris Vinc. Vivianus. 2.8 inches Æ.

5. Obverse, Galileus Galilei Patr. Flor. Mathe^m. Celes. Bust R. Reverse, above, stars; below, Astronomy and Mathematics, as female figures standing, R. & L. respectively; by them telescope, globe, etc. 3.5 inches Æ.

V.

GALILEO IN MEDALLION

BY JOSIAH WEDGWOOD, *circa* 1770.

During a visit to Liverpool, many years ago, I gave a long morning to a ramble through the Museum in William Brown Street. Of the many exhibits, which attracted my attention, all

but one have faded from memory, and that one has remained, doubtless, because it was connected with a subject in which I was interested—Galileo. Passing some glass-covered show-cases of Wedgwood ware, I stopped to examine them and, presently, found myself admiring a beautiful medallion portrait inscribed:—

Galileo 1564-1642
Italian Philosopher and Astronomer
Impression from a Mould at Etruria.

It is an oval, $4\frac{1}{2}$ in. by $3\frac{1}{2}$ in., of white paste, in a glazed frame. The bust and head are exquisitely moulded, and the face, turned to the right, is a fairly good likeness of the man in middle-age.

The broad overlapping collar (smaller than usual) and the fur-edged cloak are characteristics, the latter of which artists *will* drag in, often irrespective of seasons; as, for instance, in Inquisition and Prison scenes, which took place in the height of a Roman summer, June, 1633!

In, I think, an adjoining case, there are similar medallions of other great men, amongst them Gassendi, Descartes, and Francis Bacon. It happens that all three names are familiar to Galileian scholars. The first was his friend and correspondent, "the most philosophic among the learned," according to Gibbon, "and the most learned among the philosophic of his age." In his great polemic with Descartes, 1641-46, he divided the philosophers of his time into, practically, two schools — Cartesians and Gassendians. In 1620, he travelled expressly from Paris to Florence to see Galileo, in company with Elia Diodati, another devoted friend, and on the same mission bent.

Not so our second-named, the jealous Descartes, who, on return from a pilgrimage to Loreto, and finding himself in

Florence, 1624-25, would not call on his brother philosopher. This is a deplorable lapse from courtesy, and would be inexplicable did we not remember his general indifference—even aversion—to the works of his compeers, ancient and modern. “Laisser là les maitres, et n’apprendre que de soi” was his guiding rule. Of Galileo’s writings, he said that he saw nothing in them to make him envious, and hardly anything that he would care to call his own. It is curious that at the same time both men were composing treatises on the World, but from what different stand-points! The Frenchman’s design was to create a world *de novo*, on the basis of his theory of vortices; the Italian was content with an attempt to explain the existing one.¹

The third-named, Francis Bacon, is not so easy to place in a science quartette and *vis à vis* of Galileo; for, although he preached the experimental method as a new discovery (albeit in an unworkable form) he did not know how to appreciate Galileo’s achievements in the daily use of it for years before he wrote. “If Bacon had never lived,” says Brewster, “the student of nature would have found in the writings and labours of Galileo not only the boasted principles of the inductive philosophy, but also their practical application to the highest efforts of invention and discovery.”²

¹ Descartes’ “*Traité du Monde*” was completed early in 1633, but he suppressed it on hearing of the fate of Galileo’s treatise at the hands of the Inquisition in Rome. Many year later the chief parts of “*Traité du Monde*” were incorporated in his other works, and, after his death, it was published as a separate volume by his friend Clerselier in 1664. Cf. Mahaffy’s “Descartes,” in Blackwood’s Philosophical Classics, 1901, pp. 56-61, 211.

² “Martyrs of Science,” London, 1874, p. 109. Cf. Hume: “History of England,” *Tempo* James I; Hallam: “Literature of Europe,” Chap. XX.

VI.

GALILEO IN MEDALLION

BY JAMES TASSIE, *circa* 1790.

Soon after lighting upon the Wedgwood medallion, and, through the generosity of a stranger whom I may now call friend, Mr. H. Oatway of London, I became the happy possessor of another fine specimen by James Tassie.

Tassie was of Italian extraction, but was born in Pollockshaws, near Glasgow, in 1735. He was brought up to be a stonemason, but having wandered to Ireland, he acquired from Dr. Quin, a Dublin physician, the art of imitating gems in coloured pastes. He settled in London in 1766, where, by dint of talent and hard work, he acquired both fame and fortune. Mr. Oatway tells me that Tassie was noted for reproductions of antique gems and medallion portraits, which he executed in a paste made of liquid glass. The reliefs and grounds are white, and the general effect is often that of a cameo. James Tassie was succeeded by his nephew, William (died 1860), a small collection of whose works is in the National Portrait Gallery of Scotland. In the British Museum there are specimens of the work of both artists.

The medallion measures $2\frac{1}{4}$ in. by $1\frac{5}{8}$ in. and is mounted in a glazed oval frame of ebony. The head resembles, and I venture to suggest was copied from, the medal marked No. 4 in Nelli's list (p. 105 *supra*). Nelli thinks that it shows Galileo in old age and was done, probably, after his death in 1642. Now, Nelli's plate does *not* show an old and broken-down man of seventy-eight as Galileo was in 1642 — rather, it shows a man of forty-five prematurely aged, perhaps, through frequent illness. Again, he is designated simply Mathematicus; up to 1609 he was nothing more; but in that year he invented the telescope, and ever after he was Astronomer.

Nelli's medal No. 4, I conclude, was struck in or before 1609; and, in any case, it could easily have reached Tassie in England. Thus, it may have formed part of the books, pictures, and gems, brought together by J. Smith, English Consul at Venice, an account of which was published in "*Dactyliothea Smithiana*," Venetias, 1767, 2 vols. This collection was purchased by George III, who bore all expenses of publishing the "*Dactyliothea*," and to whom the work is dedicated.¹ Or, it may have been amongst the paintings, gems, intaglios, cameos, and coins, imported from Venice, about 1776, by Mr. T. M. Slade, and known as the Vitturi collection.

In 1791, Raspe (author of the celebrated "*Baron Munchausen*") published a catalogue of 1600 Tassie gems,² but Galileo does not appear there. Either it was considered, as Mr. Oatway suggests, of no commercial value, and so was omitted from a catalogue appealing to the multitude, or it was one of the 4,000 which Tassie had done between 1791 and his death in 1799.

VII.

GALILEO IN MEDALLION

BY A. GUARDUCCI, 1880-85.

After much consideration and many long delays, the question of a new façade (the third) for the Florence Duomo was at last settled by the acceptance, in 1868, of the designs of Emilie de Fabris. The work was begun in 1875, and, after his death in 1883,

¹ Elmes: "*The Arts and Artists*," London, 1825, p. 230 of vol. III.

² "*Descriptive Catalogue of a General Collection of Ancient and Modern Engraved Gems, Cameos as well as Intaglios, taken from the most celebrated Cabinets in Europe, and cast in coloured Pastes, White Enamel, and Sulphur, by James Tassie, modeller, arranged and described in English and French, by R. E. Raspe (57 plates containing numerous examples of gems engraved by D. Allan)*," 2 vols., 4to, cloth. Sold by J. Tassie, 1791.

was carried to completion by his assistant, Luigi del Moro, in 1886. The new façade has a grand and imposing aspect, and harmonises well with its surroundings. It is, like other parts of the church, composed entirely of marbles of different colours. It is adorned with many statues, bas-reliefs, and mosaics; and numerous coats of arms, belonging to citizens who contributed so generously to the cost.

High up, over the main (central) door, is a beautiful rose-window, and at the four corners of the enclosing square are medallion portraits of Galileo, Paolo Toscanelli, Amerigo Vespucci, and Marsilio Ficino—all four by the Florentine sculptor, A. Guarducci. Galileo occupies the left-hand lower corner, and is easily recognisable from the pavement below. Doubtless, these personages were selected as typical Florentines of great fame, but, at least, two of them deserve this special recognition, as having had some official connection with the Duomo. Galileo, because in his day he was often consulted on scientific and mechanical questions relating to the upkeep of the huge fabric, and Toscanelli, a geographer and astronomer of renown, as being the author of the famous gnomon in Brunelleschi's dome. From early times in the history of science, the obliquity of the ecliptic was a subject of study and, often, of controversy, some asserting that it was fixed and invariable; others, Galileo amongst them, that it was variable and was steadily, if slowly, diminishing. To test this question, and also to detect, as time went on, any displacement or alteration in the rigidity of the dome, Toscanelli constructed his gnomon in 1467. It consists of a horizontal bronze plate, supported on strong iron brackets, and clamped to the south side of the marble cornice, which forms the base of the lantern, surmounting the dome. At mid-day on every summer solstice (about June 21st) a ray of sunlight is projected through a small circular hole in the plate and strikes

the centre of a round marble slab, fixed in the middle of the floor of the north transept, 300 feet below.¹ This instrument is said to be the most important of its kind in the world, on account of its extreme precision, and of the great height at which it is situated.

In 1757, Father Leonardo Ximenes published a curious account of this gnomon² together with the observations made yearly from 1468 to 1512, then in 1668, and again in 1703. After a long interval they have, lately, been resumed under the direction of Padre Guido Alfani, head of the Ximenian Observatory in Florence, and it is satisfactory to learn that so far Brunelleschi's mighty structure shows no sign of weakening or movement of any kind.

It would be no slight addition to the merits of Toscanelli if we could believe him to have been the friend and encourager of Columbus in his project of finding a western route to the Indies; but recent researches have damaged much of the Columbus tradition; as to relations of any kind, direct or indirect, between the two men—simply, they never existed, and as to the rest, it is largely mythical.³

As regards the portraits of Vespucci and Ficino, they appear to have no such special claims to their present position. When Columbus returned to Seville from his first voyage in 1492,

¹ On the wall of the choir (near the nave) is a marble slab commemorating this event.

²

del vecchio e nuovo
GNOMONE FIORENTINO
e delle osservazioni
ASTRONOMICHE FISICHE
ED ARCHITETTONICHE
fatte nel verificarne la costruzione
DI LEONARDO XIMEMES della Compagnia di Gesù
In Firenze MDCCLVII.

³ Cf. Henry Vignaud's "Toscanelli and Colombus," Sands & Co., London, 1901.

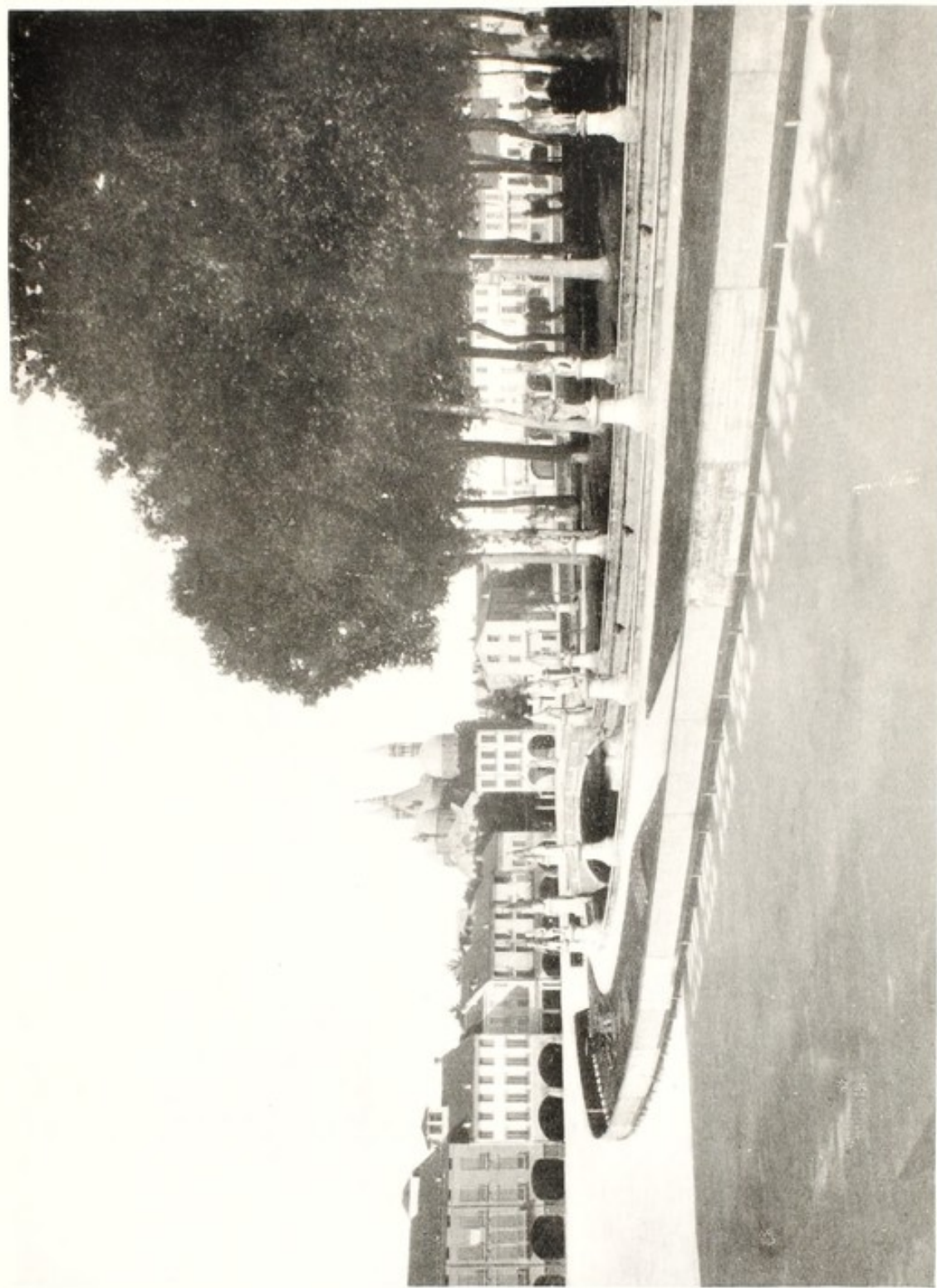
Amerigo Vespucci was living there as commercial agent for the Medici family, and, later, as factor for a rich Florentine merchant, who was then supplying the Spanish Government with vessels specially equipped for the service of the newly discovered lands in the west. While thus employed he would have many opportunities of conversing with Columbus. At all events, he now decided to quit commerce, and to turn explorer on his own account. Accordingly, in May 1497, he set out from Cadiz on his first voyage, and, after sailing for thirty-seven days, reached the mainland. He made three other voyages under the auspices of the King of Portugal and, ultimately, published full and fanciful accounts of his exploits.¹

"It contains," says Robertson, "an amusing history of his voyages, and judicious observations on the natural productions, the inhabitants, and the customs of the countries which he visited. As it was the first description of any part of the New World that was published, the book circulated rapidly in all parts of Europe, and hence the whole continent came to be called by his name; and the caprice of mankind, often as unaccountable as unjust, has perpetuated the error. Thus, the bold pretensions of a fortunate imposter have secured for him the distinction which rightfully belongs to Columbus" ("History of America," Chap. XX.).

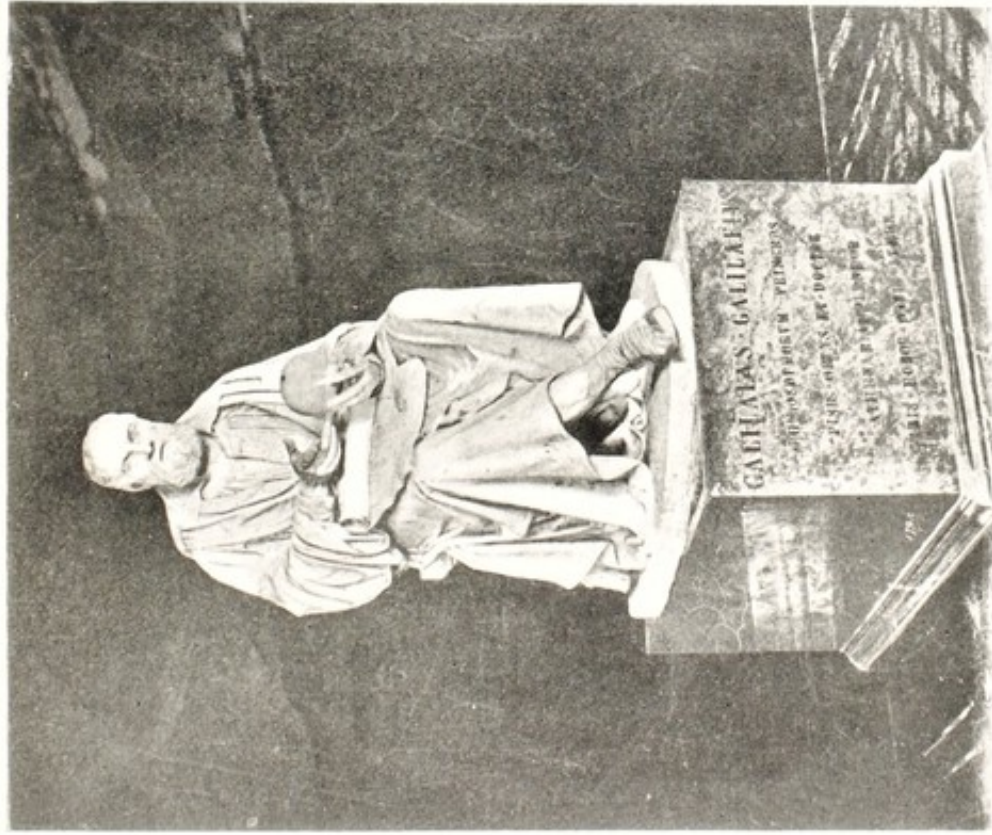
Marsilio Ficino, of Greek extraction, was brought up in the household of Cosimo de Medici (Pater Patriae) and in due time became a famous Greek and Latin scholar. He was first president of the Platonic Academy (founded by Cosimo), where the philosophy of Plato was taught in opposition to that of Aristotle. At the age of forty-two he was ordained priest, and died in 1499 an esteemed canon of the Duomo, to which rank he was advanced

¹ "Lettera di Amreigo Vespucci Della Isola Nuovamente Trovate in Quattro Suoi Viaggi"—a curious Spanish-Italian composition, printed in Florence. *Circa* 1506.

PLATE XXXIII.



Prato della Valle, Padua. From a photograph by Alinari.
(See page 131).

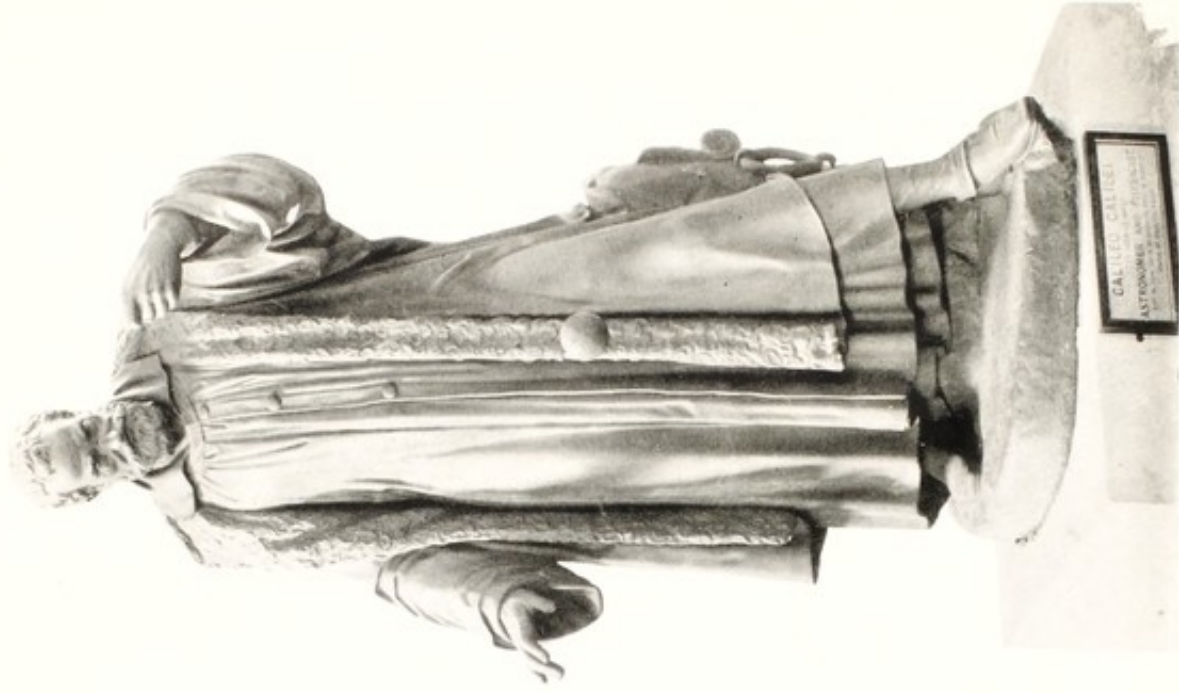


Galileo Galilei

Ricordo di Pisa

Emilio Demi

Statue in marble by Emilio Demi. In Hall of the University, Pisa.
(See page 132).



Statue in terracotta by Andrea Boni. In the Science Museum, South Kensington.
(See page 134).

(on the death of his patron) by Cardinal de Medici, afterwards Pope Leo X. His monument, ordered by the Republic of Florence, is inside the main door of the Duomo, and close to those of Giotto and Brunelleschi.

VIII.

GALILEO IN MEDALLION, 1892.

The medallion here shown is a fairly good reproduction of the 1635 portrait by Sustermans, with the added inscription G. Galilei. It is in bronze, $3\frac{1}{2}$ in. in diameter, and bears, on the reverse side, the initials R. P. which may be those of the artist, Rossi, Pietro, or of the founder, Romito.

I bought it many years ago in a Florentine bric-a-brac shop, the owner of which told me that it was one of a number cast at the Fonderia del Romito, Firenze, on the occasion (1892) of the Tercentenary of Galileo's inaugural address as professor in Padua University, December 7th, 1592.¹

1592 was a momentous year for our young philosopher, for in that year came the crisis which marked the whole of his future career. After four years of brilliant study in Pisa, he had the good fortune to attract the notice of the Marquis Guidobaldo del Monte, then the ablest mathematician in Italy, and, through him, he obtained an introduction to Ferdinando I, Grand Duke of Tuscany, "as a young man of whom the highest expectations might be formed."

Galileo's ambition was to obtain a professorship in one of the Universities for which Italy was then, and still is, famous.

¹ See p. 108, *supra*. Compare also *Per il Terzo Centenario della Inaugurazione dell' Insegnamento di Galileo nello Studio di Padova*, da Antonio Favaro, Firenze, 1892.

Accordingly, early in 1587, he made effort to secure the chair of mathematics in Bologna (vacant since 1583), but without success. Late in the same year he made his first journey to Rome, for what purpose we do not know, but, probably, with the object of finding there some opening, or in furtherance of his design on Bologna.¹ However this may be, the visit was not without result, for it led to his acquaintance with Father Cristoforo Clavio, of the Society of Jesus, the celebrated mathematician to whom the world is mainly indebted for the reform of the calendar in 1582. Little did they then think of their future relations—that the old Jesuit would be a stout opponent of the new astronomical doctrines which the younger man would as stoutly advocate, but to which, before his death on February 6th, 1612, Clavio was to become a convert, *malgré lui*.

Galileo next applied for the professorship in Padua University, which was vacant since the death of Giuseppe Moletti in January 1588, and in this connection he betook himself to Venice; but again he was unsuccessful. Soon after, a similar post at Pisa became vacant, and, taking advantage of his recent introduction to the Grand Duke, in whose gift the appointment was, he applied for it through the Marquis del Monte; but again he was unfortunate. Then there was the more humble post of professor of mathematics in Florence, which was established by Cosimo I, but which was now moribund. This he tried to have revived in his favour, through the good offices of Cardinal del Monte; but even in this attempt, the fourth, he failed. Thus, for two years, Galileo saw all his efforts to obtain employment in his own country end in bitter disappointment. Can we wonder that, repulsed at Bologna, Padua, Pisa, and Florence, he should now turn his thoughts towards the East, as to a land of promise? He and a

¹ The chair remained vacant till 4 August, 1588, when Gio. Antonio Magini was inducted.

young Florentine friend decided, towards the end of May, 1589, on this desperate enterprise. They had reached Milan, and were about to set out for Venice *en route* to Constantinople, when the chair at Pisa again became vacant. Once more he applied for the post, and, at last, was successful, through the joint influence of the brothers, the Marquis and the Cardinal del Monte. This was in July 1589, when he was barely twenty-five and a half years old. The salary was insignificant, 60 scudi per annum, or about £14 of our money, and the appointment was for three years only, but renewable. But any port in a storm, and in Galileo's needy circumstances even this wretched pittance was not to be refused; besides, he could add something to his means by private tuition.

Galileo's tenure of the Pisa chair was not a happy one. In his student days, his habit (inherited from his father) was to examine an assertion to see what it was worth, instead of blindly accepting it on faith in the teacher, or in deference to authority. Of course, this questioning of the dictates of Aristotle, Plato, and other ancient lights found no favour with the professors and his fellow-students, and they dubbed him The Wrangler. To the narrow conceptions of the time, a philosopher needed only to know Aristotle by heart; to understand him was a secondary consideration; but to contradict him was a blasphemy. Now, Galileo carried his habit of free thinking and bold contradiction into the professorial chair, and, no matter where he found a falsity, either of reasoning or of fact, he did not hesitate to denounce it. A critical instance was his public demonstration in 1590-91 of the falsity of Aristotle's law of falling bodies. This was that, if two different weights of the same material be let fall from the same height, they will reach the ground in times inversely proportional to their weights. On the contrary, our young professor said that, save for an inconsiderable difference due to the disproportionate resistance of the air, they would fall in the same time. The

Aristotelians would not listen to such "blasphemy," but Galileo would not be repressed, and determined to make them see the fact with their own eyes. So, one morning, before the assembled professors and students, he ascended the famous leaning tower of Pisa, taking a 10 lb. shot and a 1 lb. shot. Balancing himself on the overhanging edge, he let them go together. Together they fell, and together they struck the ground. Incredible to relate, his opponents were not convinced and still maintained that a 10 lb. weight must reach the ground in a tenth of the time taken by 1 lb., for so it was laid down by the Master! Under these circumstances, such demonstrations and others with inclined planes (see p. 149 *infra*) served only to increase the ill-will of his colleagues, who now turned openly against him, with the one exception of Jacopo Mazzoni, the newly appointed professor of philosophy.

Soon a wholly unforeseen circumstance came to their aid. Giovanni de Medici, natural son of Cosimo I, was at the time Governor of Leghorn. He was not unskilled as an engineer and architect, and had just designed a monster dredging machine which he wished to use in cleaning the harbour. A model was submitted to the Grand Duke, and Galileo was commissioned to examine and report upon it. He did so, and declared it useless—an opinion which subsequent trial fully confirmed. Smarting under this failure, the inventor was induced to combine with the Aristotelian professors, to whose machinations in Pisa were now added intrigues at Court. The situation became intolerable, and Galileo resigned his post before the three years' term had expired, and returned to Florence about the middle of 1592.

Meanwhile the chair of mathematics in Padua, vacant since 1588, remained unfilled. Galileo now made another attempt to secure the post, and, with letters of introduction from the Marquis del Monte to influential people in Padua and Venice, he set out

for the latter place—all his worldly goods being contained (as he used to tell his friends) in a trunk weighing less than 100 lbs. Arrived in Venice, about September 1st, he was met with the alarming intelligence that a rival was already in the field. This was no other than the formidable Magini who, as we have seen, defeated him in the competition for the Bologna chair, and who was known to have long aspired to the more coveted one in Padua. However, this time Galileo was the fortunate candidate, and was duly gazetted on September 26th, 1592. The diploma, which is preserved amongst the Galileian MSS. in the National Library, Florence, states (after preamble): “Owing to the death of Signor Moletti, who formerly lectured on Mathematics in Padua, the chair has been vacant for a long time, and, being a most important one, it was thought proper to wait till such time as a fit and capable candidate should appear. Now, as there has been found Domino Galileo Galelei, who lectured at Pisa with great honour and success, and who may be styled the first in his profession, and as he is ready to come at once to our University and there to give lectures, we think it proper to accept him. Therefore, the said Domino Galileo Galilei is hereby appointed Mathematical Lecturer in our University for four years certain, and two years uncertain (the last two being at the will and pleasure of our Serenity), with the salary of 180 florins per year.” This document must have helped much to console him for the bad behaviour of the Pisan authorities. Again unlike Pisa, where he was fined for lectures not given, through accidents beyond his control, Padua was generous and allowed him ample time to settle his affairs in Florence, and to prepare his inaugural address, which was to be worthy alike of the occasion and of the man himself. Accordingly, on December 7th, 1592, he entered on his new duties with a discourse which won the greatest admiration, not only for the profound and extensive knowledge it displayed, but for its

eloquence and elegance of diction. Unfortunately, this oration has not come down to us, but it is referred to in contemporary documents. Thus, in a letter from Padua to Tycho Brahé, dated December 28th, 1592, it is stated:—"Interea, Gallilaeus de Gallilaeis Florentinus Professionem Mathematicam hic adeptus est, qui suarum lectionum septimo Decembris initium fecit. Exordium erat splendidum in magna auditorum frequentia."¹

IX.

GALILEO IN (5) PLAQUES.

Favaro has a note of memorials of Galileo, in the form of plates and plaques, which we reproduce.

1. He (Favaro) had an old plate bearing a portrait of Galileo.
2. In the Museo Galileiano, Torre del Gallo, there was a plate, indubitably old, of Casteldurante ware, depicting Galileo on bended knees with three female figures floating around him. The one on the right is, apparently, copying stars reflected in a mirror; while high up on the left are six birds flying about.
3. An oval copper plaque with portrait in red enamel; also indubitably old.
4. A large plate of Carrara marble, bearing a portrait in black by Luigi Sabatelli, and inscribed, above, *His Galileus Iners Iam Stabat Pondere Tellus Fisco Suo, At Certe Se Modo Jussa Movet*, and below, *E Pur Si Muove*.

5. In the Royal stables in Florence is preserved a coach built in 1615, on one of the doors of which is a painted plaque, representing Galileo seated on the left of Cosimo II, his old pupil.²

¹ Tychonis Brahé, *Astronomiae Instauratae Mechanica*, Nuremberg, 1602. This work was written in 1598, as shown in the dedication to the Emperor Rudolph of Germany.

² "Atti del Reale Istituto Veneto," vol. 73.

PART IV.

BUSTS AND STATUES.

I.

BUSTS (2) OF GALILEO

BY CACCINI AND MOCHI, 1612.

In Favaro's notes on busts and monuments of Galileo ("Atti Del Reale Istituto Veneto," Vol. 72) he says:—"My first notice of an effigy, indeed of two effigies, in marble is contained in a letter from Gio. Bat. Amadori to Lodovico Cigoli, dated February 2nd, 1612, as follows:—

'I hope that within a few weeks you shall have his [Galileo's] portrait in marble, which I am having done by order of sig. Filippo Salviati, who, as I understand, intends it as a present for Prince Cesi. Indeed, I am having two done, one by Caccini, and the other by Oratio Mochi. Sig. Galileo is himself quite pleased with the likeness of each.' If these 'portraits in marble,' probably two busts, were ever completed I do not know, or that the one specially ordered for Prince Cesi ever reached its destination. The death of Salviati, following soon after that of Caccini on 13 March, 1613, may have changed the intention, or, at least, the ultimate dispositions of the writer, Amadori."

I think I can say, and with some assurance, that these two busts *have* been completed, but their ultimate destinations are strangely different from those intended by Amadori. It would appear that Caccini's "portrait in marble" never got beyond the preliminary stage of a plaster model, owing, no doubt, to the death

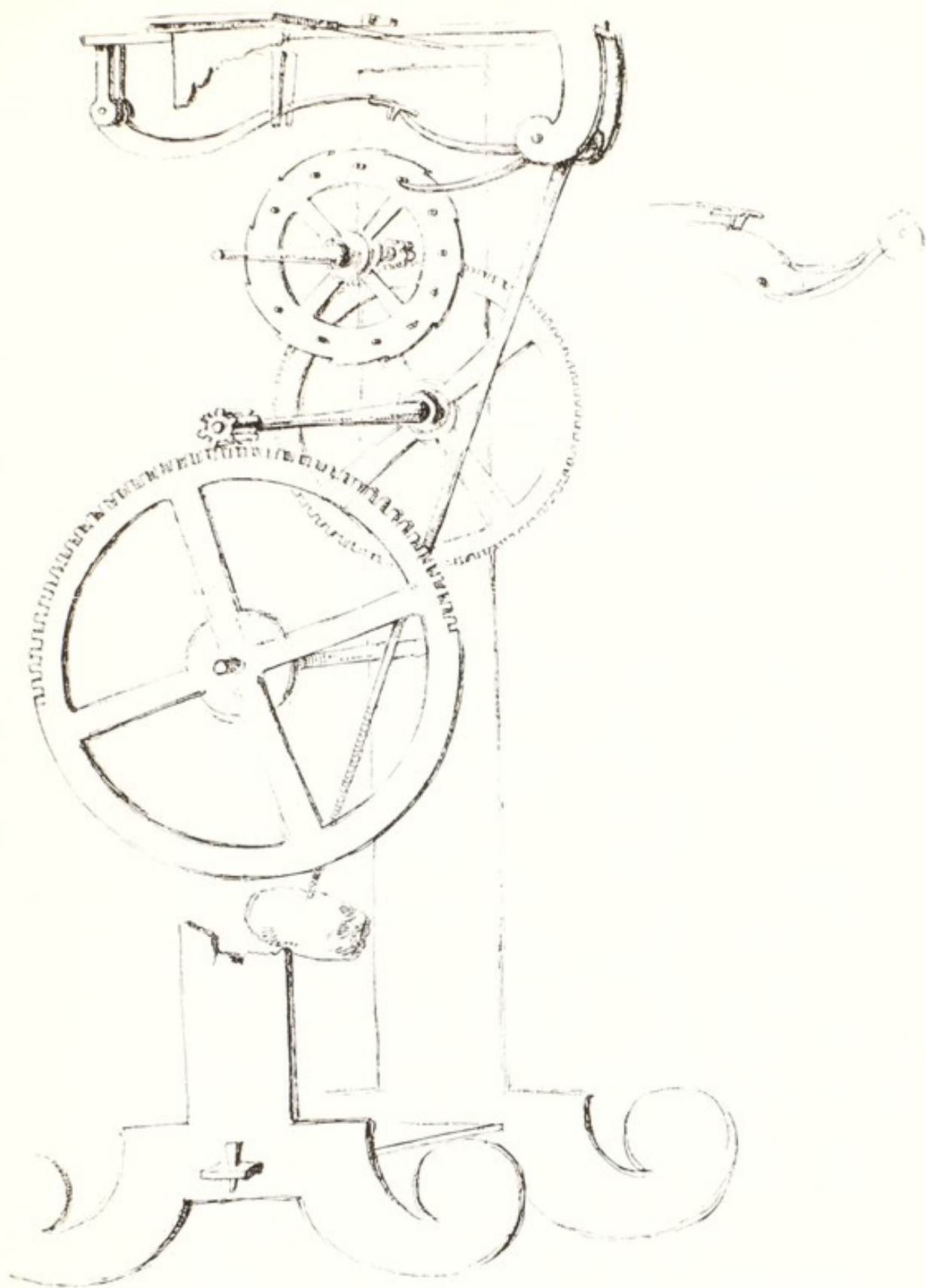
of the artist as just stated. Certainly, there is no trace of a bust in marble, but Viviani makes mention of a "bust by Caccini *in protoplasmate*, which was modelled for an intended statue of Galileo, in bronze or marble, ordered by Cosimo II, a former pupil, and now Grand Duke of Tuscany, but which was never executed—not even begun—owing to the death of the sculptor."

We must assume that Caccini's plaster model came into the possession of Viviani before 1660, for in or about 1660, he had it copied in bronze as an intended offering to the King of France, Louis XIV, in return for the handsome pension recently bestowed upon him. The bust was to accompany a volume on the Life and Works of Galileo, to be dedicated to his Majesty; but for various reasons this proposal was dropped. Viviani kept the bronze bust and later, in 1674, he presented it to the Galleria Medicea in Florence—"in segno di gratitudine collocata nella Galleria Medicea, l'anno 1674."

There is no trace of this donation in the records of the Gallery. In reply to an inquiry, Favaro was informed that "the Gallery possessed only one marble bust of Galileo attributed to a mediocre sculptor of the 17th century, Carlo Marcellini. In 1797 this bust, together with one of Amerigo Vespucci by Foggini, was placed in deposit in the Museum of Physics and Natural History, and to-day can be seen in the courtyard of the Specola, where, truly, it is held in little regard. Of the bronze bust after Caccini's plaster model it is not possible to find any trace."

With these notes fresh in mind, I saw in an old "Guide to Cambridge," 1830, that the bust of Galileo in the Master's Lodge, Trinity College, is by Carcini, a misprint, I thought, for Caccini. Further inquiry elicited the interesting information that the bust is of Plaster of Paris, two feet broad by two feet one inch high, inscribed simply Galileo. On one side of the pedestal is printed Robt. Smith Posuit 1759; and, on the other side, Caccini Fecit.

PLATE XXXV.



Design for Pendulum Clock by Vincenzo Galilei, from his father's dictation (Galileian MSS., Florence).

(See page 135).

PLATE XXXVI.



Statue in marble by Pio Fedi in the Medical Institute, Belfast.
(See page 140).

The late Master, Dr. Butler, had "no doubt that the bust was presented by Dr. Robert Smith, the distinguished Master of our College, who succeeded Dr. Bentley, and it seems more than probable that he brought it with him on his return from a visit which he is known to have made to Italy."

Here, then, we have hunted to earth in Cambridge Caccini's long-strayed plaster bust, and, almost simultaneously with this discovery in far-away England, its companion in marble by Mochi was recovered in Italy. It had not strayed from its native place, but, simply, was there buried in oblivion. It had been put away—a nobody's child—in an obscure ground-floor room in the Palazzo Pitti!¹

As to the copy in bronze of the Caccini bust, ordered by Viviani, I think we have been equally fortunate in our quest, as I hope to show in the next section.

II.

BUST OF GALILEO

ATTRIBUTED TO PIETRO TACCA.

In the last section we traced the history of a bronze bust (made to the order of Viviani from Caccini's plaster model) to the Galleria Medicea in 1674, but only to be told that there is no mention of it in the records of that Gallery! Then, did Viviani again change his mind, and hold back the donation at the last moment? His precise words (quoted above) seem to preclude that idea, but how otherwise can we explain the absence of a record of the transaction? We must assume then that the bronze bust got "lost." It was not in the Galleria Medicea, and it was not in

¹ See "La Nazione" of Florence for July 10th, 1913.

Viviani's possession at his death in 1703. I suggest that, between 1674 and 1703, it found its way to England.

About 1906, Mr. Max Rosenheim, an eminent antiquary, saw a fine bronze bust in a garden in the west of England, where for many years it had been exposed as a garden ornament. With his artistic eye he saw at once that it was deserving of a better fate, and purchased it. With the aid of photographs he identified it as a Galileo, and after further study satisfied himself that it was a fine specimen of Tacca's work. It passed to a brother, the late Mr. Maurice Rosenheim, F.S.A., and, I believe, still remains in the family possession. It measures approximately 25 in. by 25 in.

Pietro Tacca da Carrara was an eminent Florentine sculptor, and was noted as the best pupil of Giovanni Bologna, whose style he copied. He and Galileo were friends in Florence, where the tradition runs that the latter made for Tacca all the baricentric calculations necessary for the stability of his figures—especially his great equestrian statue of Philip IV in Madrid. It is, therefore, not an impossible supposition that the bust is the work of Tacca, but as to its probability experts are doubtful.

I suggest that the Rosenheim bust is the one cast to the order of Viviani for the King of France, as above stated (Section I.). On comparing photographs of the Cambridge and Rosenheim busts, they will be seen to be strikingly alike. The lines of the latter are clearer than in the plaster model in Cambridge, but that may be accounted for by the wear and tear of three centuries. The dimensions are practically the same.

III.

LARGE BUST OF GALILEO

? 17TH CENTURY.

This is a large half bust in terracotta, and may represent Galileo between the fifties and sixties of his age. The Artist's name is not known, but it has been judged a work of the seventeenth century. It has long been one of the chief attractions in the Museo Galileiano, Torre del Gallo, and was shown at the Exhibition of the Società Donatello in Florence, where it was much admired.

It has been reproduced in "Illustrazione Italiana," December 18th, 1892.

IV.

BUST OF GALILEO IN OLD AGE

BY G. B. FOGGINI, *circa* 1691.

According to Nelli (Op. Cit., p. 872), Viviani caused a bust of his beloved master in old age to be cast by Giovanni Batista Foggini. At Viviani's death in 1703, this, with all his precious relics of Galileo, letters, papers, portraits, etc., passed to his heirs, Carlo and Angelo Panzanini, who, in the course of a few years, miserably scattered the collection.¹

This bust came into the possession of Gio. Francesco Pecci, at whose death it was acquired by the celebrated mathematician, Tommaso Perelli, and, ultimately, it became the property of Giuseppe Salvetti, a noted architect and engineer in Nelli's day. Where it is now we do not know.

¹ See a full account in the writer's "Galileo: His Life and Work," London, 1903, pp. 427-29.

V.

BUST OF GALILEO

BY LUIGI FERRARI, *circa* 1850.

At one time the Archduke Ferdinand Maximilian of Austria (afterwards the ill-fated Emperor of Mexico) had the idea of decorating the Cabinet of Physics in the Padua University with a casket enshrining the vetrebra filched from Galileo's body at the time of his reinterment in 1737.

Later, it was thought more appropriate to substitute a bust, and L. Ferrari was commissioned to do the work. In 1861, it was transferred to its present position in the Aula Magna of the University—a place peculiarly sacred to Padua's greatest professor.

Originally, it bore on the pedestal the following inscription:

Galilaei De Galilaeis
Effigiem
Heic Ubi Docuit
Franc. Josephus I. Imp. Et Rex
Ferd. Maximiliano Fratre
Curante
Ponendam Statuit
Anno MDCCCLXI.M. Nov.

But in 1866, at the height of the Risorgimento, the patriotic fervour of the Paduans caused the last five lines to be erased, substituting therefor the words:—

Patavinum Archigymnasium Colit.

VI.

BUST ON THE PINCIO, ROME.

SCULPTOR UNKNOWN, *circa* 1860.

Our Baedeker tells us that the Collis Hortorum of the ancients was called Mons Pincius from a palace of the Pincii, an influential family of the later period of the empire. Here were once the famous gardens of Lucullus. A vineyard belonging to the monastery of Santa Maria del Popolo was converted by Joseph Valadier, the Roman Architect, during the Napoleonic régime (1809-14), into the present beautiful pleasure-grounds. Near the middle of the garden rises an obelisk, which Hadrian erected in front of the tomb of Antinous on the Via Labicana. It lay almost buried in a vigna outside the Porta Maggiore till 1633, and finally was erected here in 1822. 'The various walks are embellished with busts of distinguished Italians ("Central Italy and Rome," 1904, p. 158).

The bust of Galileo has little to recommend it, the sculptor's name is not known, even the date of erection is not certain, but Favaro thinks it would be some short time before 1860. By some strange irony of fortune, this particular bust has been selected, out of scores of others in the garden, to form a peg on which to hang a modern pasquinade of the silly kind. A present-day politician and son are passing down an ally of the Pincian Gardens, lined on each side with busts of an unfamiliar kind. The boy carries an open Guide Book in one hand, and drags a hoop with the other : —

"All Pincio, Fra Qualche Tempo: Papà, chi era Galileo Galilei? Sè C'è ancora un libro che ne parla, sarà stato per lo meno un allevatore di cavalli da corsa, o un grande motociclista."

Busts of Galileo

In addition to those mentioned in the text.

NO.	MATERIAL.	SCULPTOR.	DATE.	WHERE PLACED.	REMARKS.
1	Bronze	G. B. Foggini	1691	On front of Viviani's house, Florence	Made from Caccini's plaster model of 1612.
2	Marble	V. Foggini	1737	Tomb in Santa Croce, Florence	A plaster cast, is in Portrait Gallery, Crystal Palace, No. 185a.
3	Marble	...	?1750	Accademia dei Lincei, Rome	In Meeting Room alongside an Autograph of Galileo.
4	Marble	D. Manera	1825	Conservatori, Rome, presented by Canova	A plaster cast, is in Portrait Gallery, Crystal Palace, No. 185.
5	Marble	S. Monti	1830	Museo Civico, Brescia	
6	Marble	Demi or Costoli	1835	Villa Bellosguardo	Outside Florence, occupied by Galileo, 1617-31.
7	Marble	...	1843	Villa Il Gioiello, Arcetri	Galileo's last home, 1631-42
8	Marble	L. Ferrari	1847	Venice	First floor corridor of Ducal Palace.
9	Plaster	...	...	Via della Costa, Florence	Over an inscription on front of Galileo's house.
10	Plaster	Fantacchiotti	1877	Science Museum, S. Kensington, Florence	Presented by Istituto di Studii Superiori, Florence.
11	Galvano-plastic	...	1905	Museo Galileiano, Pisa	In possession of General Antonio Botto, Istituto Geografico Militare.
12	Terracotta	Egisto Rossi	...	Florence	In Torre del Gallo, Arcetri, Florence.
13	Marble	...	...	Florence	In palace of the Archbishop.
14	Marble	...	...	Bagno á Ripoli	In Palazzo Ricasoli, Ponte della Carraia.
15	Marble	...	...	Capponi Family, Florence	In Villa dei Gamberucci.
16	Bronze	Romanelli	...		Top of reliquary containing thumb and fore finger of Galileo's right hand.

VII.

STATUE OF GALILEO IN PADUA

BY DANIELETTI, 1780.

Padua has the honour of being the first to erect a statue of Galileo in a public place, namely, the large open Piazza Vittorio Emanuele, formerly known as Prato della Valle. It was executed in 1780 by the Paduan sculptor, Pietro Danieletti, to the order of Leopold of Austria, Grand Duke of Tuscany.

It shows Galileo in the dress of his period (17th century), standing erect; the face is directed upwards, and the eyes are shaded by the open right hand, as if in the act of observing the sun. The left hand holds a telescope, and beside it hangs an open scroll, showing the four satellites of Jupiter. At the feet are a quadrant, and Galileo's proportional compass, which he designed in his early days in Padua, 1596.

In the centre of the prato or piazza is a large clump of trees, surrounded by two wide concentric circles, along which at regular intervals statues are placed, to the number of seventy-three. Apparently, the condition for admission to this Walhalla is that the entrant must have contributed in some way to the glory of Padua.

On the pedestal is the following inscription:—

Galileo Galilei

Florentino

Summo Gymnasii Patavini Ornamento

Leopoldus Austriacus

Magnus Hetruriae Dux

Genio Loci Indulgens

P.C.

Anno MDCCLXXX.¹

¹ Illustrazione del Prato della Valle, Ossia, della Piazza delle Statue di Padova, 1807. Nel Seminario di Padova dal Antonio Neumayer.

VIII.

STATUE IN PISA

BY EMILIO DEMI, 1839.

On the occasion of a Congress of Italian Scientists held in Pisa, October, 1839, a magnificent statue of Galileo by Emilio Demi was inaugurated with an oration by Giovanni Rosini. Galileo is sitting in professor's gown, and holds a globe in his left hand, while the right, slightly extended, is pointing towards the globe, as if in the act of demonstrating. A partly unrolled scroll, showing astronomical designs, rests on the knees. The pedestal is inscribed:—

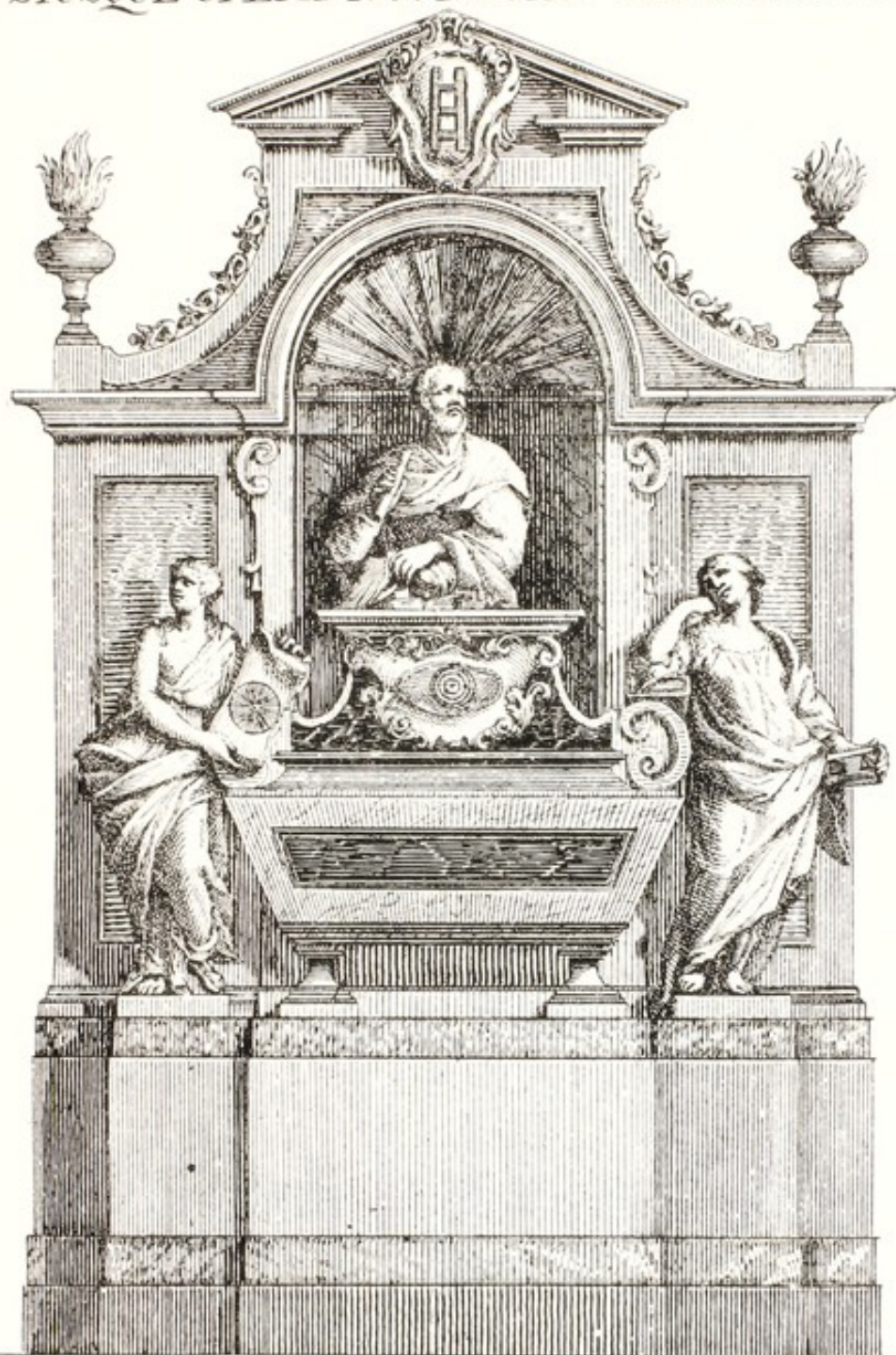
Galilaeus Galilaeus
Philosophorum Princeps
Pisis Ortus et Doctor
Athenaei Splendor
Feris Honor Orbis Plenum.

A full-sized copy of this statue in clay can be seen in the entrance hall of Alinari Brothers, Artists and Photographers of world-wide fame, Via Nazionale, Florence.

My friend, Mr. W. H. Patterson of Belfast, possesses a copy in Statuette form, 13 in. high, including base, and carved in alabaster; and there was another copy about 20 in. high in the Museo Galileiano, Torre del Gallo.

In the Hope Collection, Oxford, there is an engraving of, probably, the original drawing, without engraver's name or lettering of any kind. The drawing is also reproduced in "Maggazzino Pittorico Universale," Genova, 1837, and incisions by G. B. Gatti and others are often met with in Italy.

*GALILÆI SEPULCRUM AB JO. BAPT. CLEMENTE NELLIO
STEPHAN. ORD. EQUITE, PATRICIO, AC SENATORE FLOËNO
AN. 1737. AERE PROPRIO EXTRUCTUM.
IPSIUSQUE OPERA NOVISSIME DELINEATUM.*



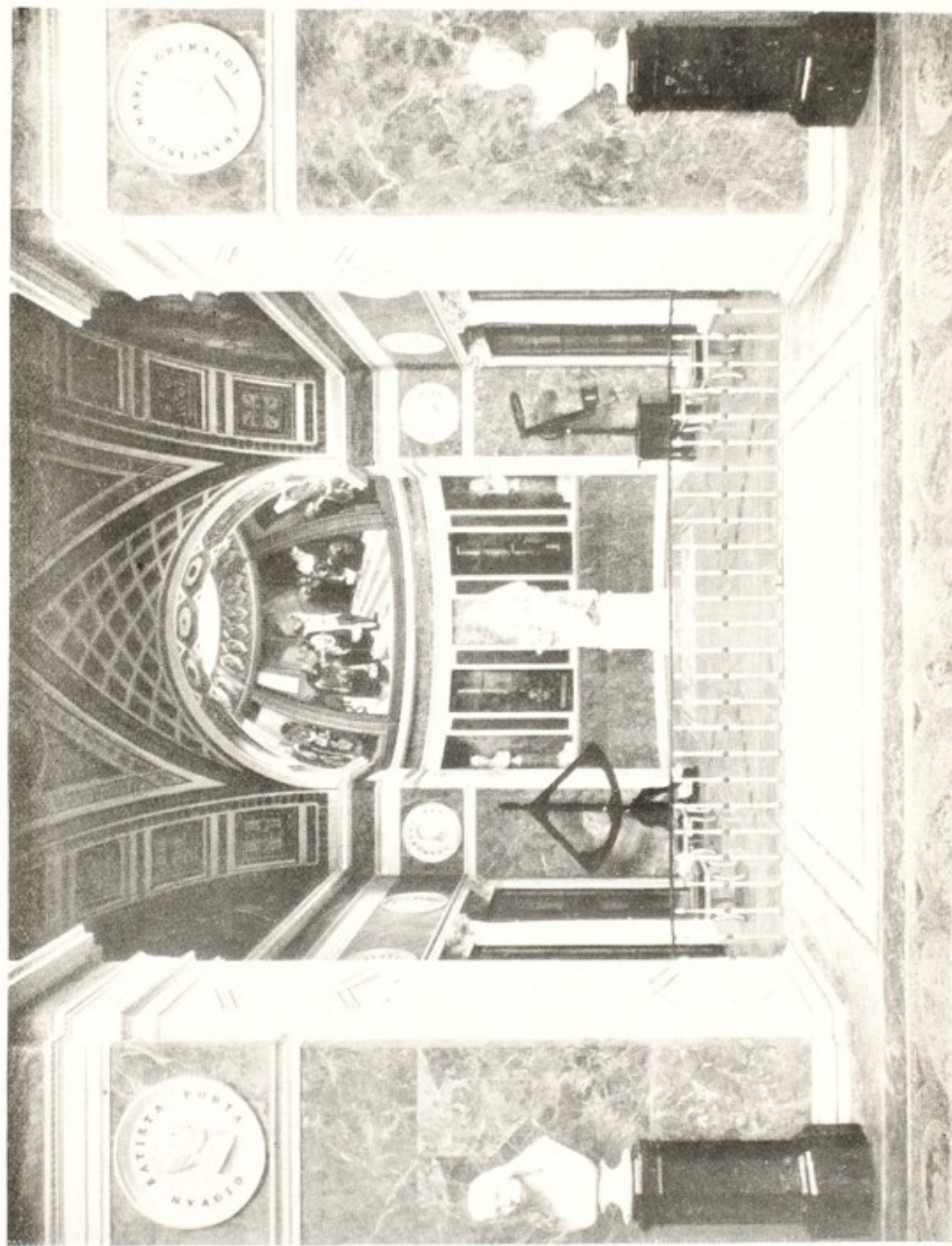
Scala Cubitorum Flor. & vulgo Braccia.

Jo. Bapt. Foggini Archite.

Joseph Calandri excudit.

Tomb in Santa Croce, Florence, by Gio. Bat. Foggini. From an old engraving.
(See page 143).

PLATE XXXVIII.



Tribuna di Galileo, Florence. From a photograph by Alinari.
(See page 144).

IX.

STATUES (2) IN FLORENCE

BY A. COSTOLI, 1840.

These two full-length statues are much alike, differing only in details of pose and drapery. They are well known, and are so easily accessible as to need little more than a precise indication of their whereabouts. One occupies a niche (No. 9) in the outer wall of the portico under the Uffizi Gallery, and is one of twenty-six statues of great Italians.¹ The other is in the centre of the semi-circular recess of the Tribuna di Galileo, which occupies a part of the first floor of the Museum of Physics and Natural History. Both statues were executed in white marble about 1840, and by the same sculptor, Aristodemo Costoli, to whom, also, is due much of the sculpture work in the Tribuna itself.

X.

STATUE IN OXFORD

BY ALEXANDER MUNRO, 1860.

The University Museum in Oxford was erected in the years 1855 to 1860, and was opened in the latter year. Around the spacious central court are many statues of great scientists of all nations. The collection was begun by Queen Victoria's presentation in 1860 of statues (in British grey stone) of Francis Bacon, Galileo, Newton, Leibnitz, and John Hunter. Others by various donors have since been added—such as Aristotle, Roger Bacon, Harvey, Linnaeus, Oersted, George Stephenson, Darwin, etc.

¹ Two of these statues, No. 5, Andrea Cesalpino, and No. 25, Niccolò Pisano, may be mentioned here, because they are the work of Pio Fedi, a modern sculptor of whom we shall have more to say presently.

The statue of Galileo by William Munro is life size, the figure erect, and the likeness fairly good, but too old for the period chosen, which is the invention of the telescope in August 1609. The figure is shown full front, shoes, tight hose, tunic buttoned at the throat, and secured by a belt round the waist. Over all a long loose cloak well open in front and edged with fur. Above this the usual wide collar. The hands are slightly outstretched and about 12 in. apart, the right holds a convex lens, the left a smaller concave one, the face is bent, intently regarding the lenses, and evidently thinking out the problem—how to combine them so as to make distant objects appear near; in short, he is excogitating the telescope.

The model (20 in. high) of this very pleasing statue is preserved in the Ashmolean Museum, Oxford (Archway leading from Coombe Room to the Great Gallery), and is inscribed:—Sketch Model for Statue now in University Museum by Alexander Munro, b. 1825, d. 1871: Presented by Mr. J. A. R. Munro.

XI.

STATUE IN SOUTH KENSINGTON

BY ANDREA BONI, 1864.

This is a fine example of terracotta work by Andrea Boni, a noted Milan sculptor, after the original work by Eugenio Rados. It was purchased in 1864, and is now in the Science Museum, South Kensington.

The figure, 6 ft. 3 in. high, represents Galileo in middle age. The left hand, slightly raised, holds a weighted string or pendulum; the face and the right hand are directed to the string, as if in the act of demonstrating the law of pendulum oscillations¹

¹ A similar statue, probably a copy, decorates the top of the Villa Breda Ponte di Brenta, near Padua.

Here the sculptor commemorates Galileo's first discovery in 1581-82 of the synchronism of pendulum oscillations. As the story goes, the medical student of eighteen was performing his devotions one afternoon in the Cathedral of Pisa, and in view of a heavy oil lamp, which hung from the roof by a long chain. In order to light it more easily the attendant drew it towards him, and then let it swing back. Galileo at first observed this simple incident in the usual heedless way, but quickly his attention was riveted to the swinging lamp. The oscillations at first considerable, gradually became less and less, but, notwithstanding, he could see that they were all performed in equal times, as he was able to prove by timing them with his pulse—the only watch he possessed! This was the first attempt at accurate measurement of any bodily function, as well as the basis of modern clocks. But he was not then thinking of clocks, only of the construction of an instrument which should mark with accuracy the rate of the pulse, and its variation from day to day. He quickly gave form to his idea, which was welcomed with delight by the physicians, and was long in general use under the name of *Pulsilogia*. In many of his subsequent investigations Galileo utilised this principle, as in his innumerable experiments on motion, his long-continued observations on the periods of Jupiter's satellites, and, just before he died, in the design of a pendulum clock.¹

¹ A working model of this clock, inscribed *Eustachio Porcellotti costruito a Firenze l'anno 1883*, is in the Science Museum, South Kensington, and, as I am informed, keeps very good time.

XII.

STATUE IN LIVERPOOL

BY W. F. WOODINGTON, 1866.

The quadrangle of the Liverpool Exchange has many attractions—even for a mere researcher like me. After purchasing Cipriani's Galileo as a Columbus, as told on a previous page, I chanced to pass through the quadrangle on my way home, and had another surprise. I found Galileo, not masquerading as Columbus, but openly, as one of a goodly band of Navigators!

The south façade is adorned (in the pediment) with an allegorical group—a female figure (Commerce) is seated in the centre and supported right and left by representatives of distant and backward peoples brought together by trade and commerce.

On the parapet, below the pediment, are the statues in white stone of six navigators. The central figures are Galileo left, and Mercator right, as preparing and showing the way, which Columbus and Drake (to right of Galileo), and Raleigh and Cooke (to left of Mercator) have practically followed.

The statue of Galileo, which has little resemblance, represents him as a robust man of middle age, with thick wavy hair and beard, and wearing a queer-shaped low-crowned cap. The dress consists of the usual wide collar, tight-fitting trousers, tight tunic buttoned and secured at the waist by a belt. Over tunic a flowing cloak edged with fur. In the right hand he holds a globe; the left is at rest by his side, but the forefinger seems to be pointing to earth.

The statue is the work of the sculptor, W. F. Woodington, 1866.

XIII.

STATUE ON BURLINGTON HOUSE

BY WYON, 1869.

The building facing Burlington Gardens was erected in 1869 (from the design of Sir James Pennethorne) for the purposes of the London University, and, practically, forms part of the block of buildings known as Burlington House.

The northern façade is covered with statues of great men of all nations to the number of twenty-two. On the parapet, commencing on the left-hand side, are Galileo, La Place, Goethe, Galen, Cicero, Aristotle, Plato, Archimedes, Justinian, David Hume, John Hunter, and Humphrey Davy; and lower down, another row of Cuvier, Leibnitz, Linnaeus, Newton, Bentham, Milton, Harvey, Lock, Bacon, and Adam Smith.

The statue of Galileo by Wyon is in Portland stone, and is eight feet two inches high, draped in a long flowing mantle. The right hand holds a scroll, the elbow resting gracefully on a short pillar. Behind is seen an armillary sphere.

XIV.

STATUE IN MILAN

BY PIETRO MAGNI, 1878.

On the façade of the Galleria Vittorio Emanuele, Milan, on each side of the grand entrance, are many (25) statues of great Italians, and around the central hall some beautiful frescoes—all the work of Milanese artists. Among the statues we may mention those of Galileo, Leonardo da Vinci, Michelangelo, and Alessandro Volta, all by the sculptor, Pietro Magni. Statues of Marco Polo,

Dante, Raphael, Columbus, Savonarola, Machiavelli, Romagnosi are also here; and many besides, whose names are not so familiar to English readers.

XV.

GALILEO AND MILTON

BY CESARE AURELI, *circa* 1880.

In this fine composition Cesare Aureli translates very effectively into marble the thoughts of Giacomo Zanella in his poem *Milton e Galileo*, expressive of the homage of the young English poet for the old Italian philosopher.¹

The old and infelicitous Philosopher is seated on a chair of old Florentine make. He holds in his left hand an armillary sphere, and with the right points in an uncertain hesitating way towards the centre of the sphere, where the sun is indicated as the centre of the solar system, according to Copernicus. The tired and fretful expression of the face, the (seeming) movement of the vacant eyes, "rolling in vain to find the day," the tense attitude of the whole man indicate a supreme effort to recover, at least, some of that sight which, as he himself said, had seen more than all the sons of Adam who went before him! With head thrown forward and eagerly turned towards his visitor, he is giving proof upon proof of his (to Milton new) astronomical doctrines. The poet who stands before him, mute and immobile, in his budding manhood, handsome in face and dress, calm yet eager in expression, is a fine contrast to the agitated, infirm, and blind Galileo. The attitude of Milton shows mental concentration as if he wished to take in—as the words of an oracle—the sublime ideas enunciated by the speaker.

¹ "Versi di Giacomo Zanella," Firenze, 1868.

For some years the plaster model of this work adorned the Palazzo Corsini in Rome, the new home of the Accademia dei Lincei, of which Galileo was an original member. Later, Aureli removed it to his studio, and translated it into marble.¹

XVI.

STATUE IN BELFAST

BY PIO FEDI, 1890.

We owe it to the kindness of the late Mr. W. H. Patterson of Belfast that we are able to give to this magnificent work of Pio Fedi the publicity it deserves, for, as we shall see presently, it is not known outside Belfast!

Writing on March 17th, 1915, Mr. Patterson says:—"I saw today in Belfast a magnificent white marble statue of Galileo, more than life size, and signed Pio Fedi scolpi. I am told that many works in stone and bronze by this sculptor were sold by auction in Florence about twenty years ago. This statue was then acquired by the late Mr. Edward Robinson of Belfast at the cost, it is said, of £700. It was recently sold by his heirs to Sir William Whitla M.D. Professor of Materia Medica in our University here, and he has just presented it to the Belfast Medical Institute. It is now suitably placed in one of the lower rooms of the Institute—a fine building which I believe we also owe to the public-spirited munificence of the same Sir William Whitla. The figure is seated. the head is splendid, not in the least like the statue by Demi now in Pisa. There is all the difference between *dead* and *living*; if anything, it recalls in its power and massiveness the Moses of Michaelangelo in Rome."

¹ "Galileo e Milton, Gruppo in Marmo di Cesare Aureli," Roma, 1912.

I have been favoured with a description of this statue, taken from a "Review of Fedi's Works on Exhibition in Florence," two years after his death, i.e. in 1894. I quote it specially in view of the extraordinary fact that the pamphlet is unknown in Florence—as was also the statue itself until I drew Favaro's attention to it. He had never heard of it! and, although Fedi's other works are well known in art circles in Florence, he could find no one who had ever heard of Fedi's Galileo!

After a few introductory words by Sir William Whitla, he quotes the Review as follows:—

"A colossal statue in Carrara marble. The celebrated astronomer is represented in the prison of the Inquisition sitting on a stool; a map of the world and rolls of paper lie on the ground. The right leg is extended, and the left is bent. The right hand rests on the knee, on which is unrolled an astronomical map. The other hand supports his chin in a thoughtful attitude. A long beard falls on his breast. The brows are knitted, and the face wrinkled. He is completely absorbed in the working out of some new problem, or, perhaps, he is thinking of his famous aphorism 'Eppur si muove' ('It moves for all that').

"The work was intended for the monumental cemetery at Pisa. The author was so fond of his work that he did not wish anyone to touch it. He himself rough-hewed the block, and carried it out to the end without adding anything thereto.

"Pio Fedi loved his art and cultivated it with the passion of the ancients; he took the subjects of his works from classical sources, thus drawing his inspiration from the actual font of eternal beauty.

"To this artist has been granted in his lifetime one of the greatest of honours—one of his works, 'L'Enlèvement de Polyxene,' has been purchased by public subscription raised by

PLATE XXXIX.



L. Sabatelli del.

Pieraccini dis.

P. Lasinio inc.

(1)



L. Sabatelli del.

Pieraccini dis.

P. Lasinio inc.

(3)



(2)

L. Sabatelli del.

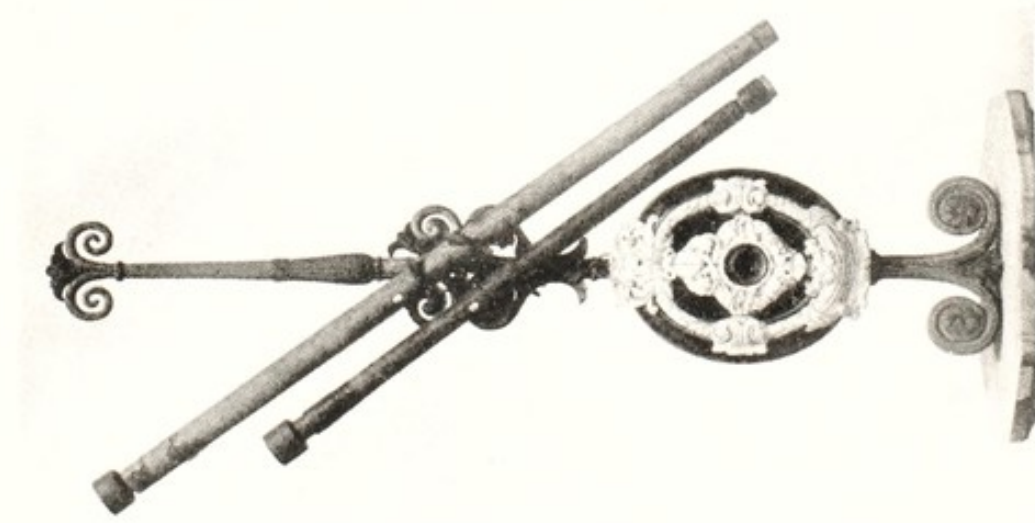
Turco dis.

P. Lasinio inc.

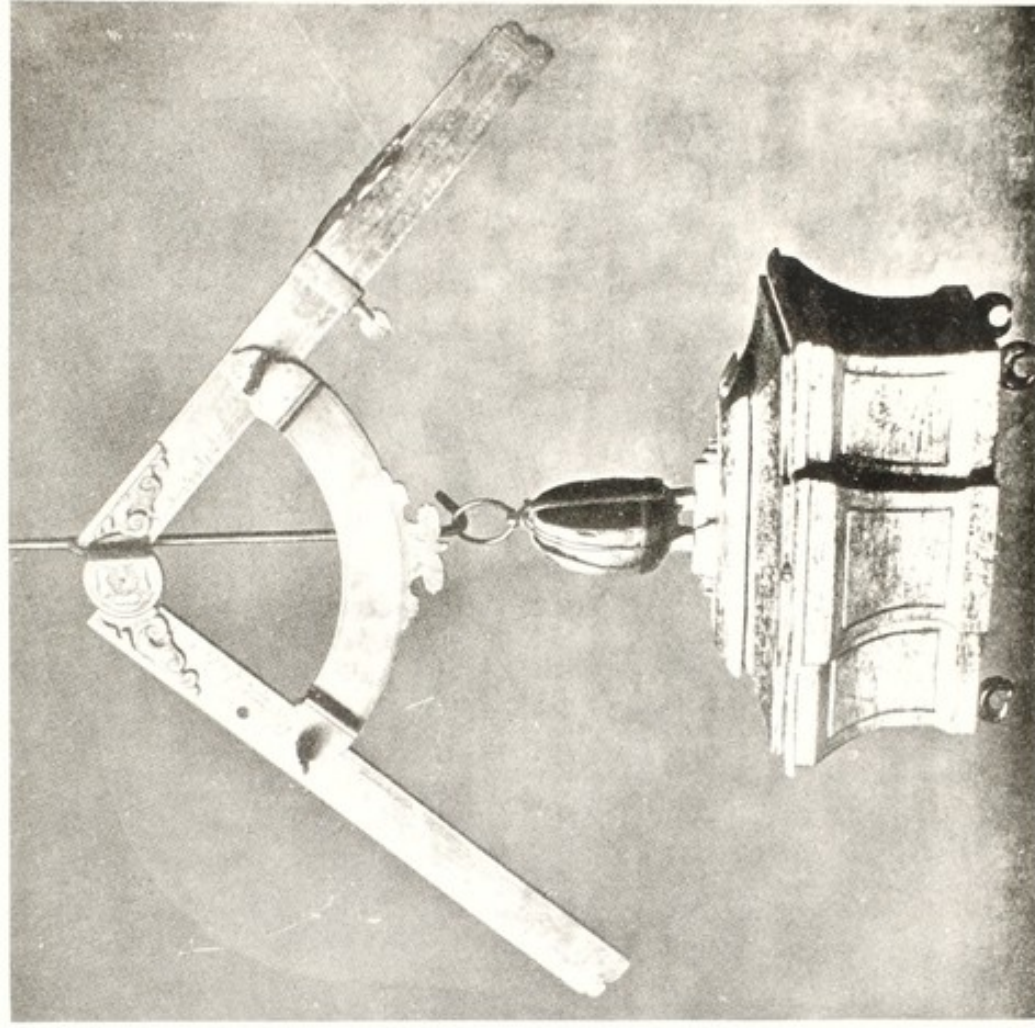
(1) The rising (2) The zenith (3) The setting of Galileo's genius (Frescoes in Tribuna di Galileo). From old engravings.

(See page 147).

PLATE XL.



Galileo's Telescopes, in the
Tribuna di Galileo.
(See page 148).



Galileo's Loadstone and Geometrical and Military Compass,
In Tribuna di Galileo.
(See page 148).

the Florentines and has been placed beneath the roof of the Orcagna, where it represents modern art side by side with the immortal works of Benvenuto Cellini, Donatello, and Jean Bologna, in what the Florentines consider to be the most beautiful portico in the world, and the monument-capital of the realm of art.

“His Dante group is in the Pitti, and other works of his are met with in various galleries and public squares in Italy.

“That it is a faithful portrait of Galileo is vouched for by the fact that the sculptor copied the death mask of the great scientist which is still preserved in the Florentine Museum.””

XVII.

GROUP IN PLASTER

BY EZIO SIGHIERI, 1894.

This work, presumably now in Pisa, is a modern group study in plaster (gesso), and represents in low relief one of the many examination scenes in Galileo's trial by the Roman Inquisition, 1633. The young sculptor, Ezio Sighieri, shows Galileo confronting three Dominican monks who are questioning him out of his incriminating *Dialogo*, in the hope of wearing him out and extorting his submission; but he maintains his defence bravely, and is, for the *n*th time, giving proof of the truth of his astronomical discoveries, and of his deductions therefrom, to the evident chagrin of his examiners.²

¹ Museo Galileiano, Torre del Gallo, see p. 127, Sec. III, *supra*.

² G. A. Pisoni: “Galileo Avanti ai Teologi del Santo Uffizio in Roma,” Pisa, 1894.

PART V
MONUMENTS AND MURAL INSCRIPTIONS.

I.

TOMB IN SANTA CROCE, FLORENCE,
BY FOGGINI, 1737.

On the evening of January 8th, 1642, Galileo breathed his last, at the age of nearly seventy-eight, fortified by the last rites of the Church and—"the benediction of Urbano VIII." His son and daughter-in-law, Torricelli, Viviani, and the parish priest of Arcetri were around his bed.

Not only was his power of making a will disputed, but the propriety of burying him in holy ground was questioned by some fanatics, who could see in the life of this great man the one fact only, that he died under the sentence of the Holy Office, vehemently suspected of heresy. On a reference to the proper authorities, his power of making a will was upheld, as also his right of burial in consecrated ground. Accordingly, preparations were made for a public funeral such as would best show the sense of loss of the Court and people of Florence, and the sum of 3,000 crowns was collected for the erection of a marble monument in the Church of Santa Croce. At once the papal authorities raised objections, and the friends of Galileo were constrained to hide away his body in a cell, 9 ft. by 6 ft., in the Chapel of the Novices. It was not until thirty-two years later (1674), and when Urbano VIII had long been dead, that Father Gabriele Pierozzi of Santa Croce ventured to paint on the wall of the cell an inscription, and

to place above it a poor bust in clay painted in imitation of marble.¹

Dying in 1703, Viviani left his property to his nephew, charged with the condition of erecting a monument in bronze and marble as soon as permission could be obtained. For over thirty years no attempt was made to carry out his wish, and then the work was taken in hand, not by the heir who died in 1733, but by his executor, Gio. Batista Nelli.

In 1734, inquiries were made as to whether there was any decree of the Holy Office which would prevent the erection of such a monument. The reply was that there was nothing against it, provided the inscription was submitted for approval. Accordingly, the work was begun, but dragged on for nearly three years. Finally, on the night of March 12th, 1737, and in presence of the leading clergy, of all the professors of the schools of Florence and Pisa, and of literary and artistic men from all parts of Italy, Galileo's remains were removed to the mausoleum in the north aisle of Santa Croce—the Pantheon of the Florentines—whither also were conveyed the remains of Viviani, according to his last wish.

The monument, which we reproduce, is the work of Gio. Batista Foggini, assisted by his son, Vincenzo, and Girolamo Ticciati. The bust of Galileo and the figure representing astronomy are the work of the son, Vincenzo; while the figure of geometry is from the chisel of Ticciati.

There is a long inscription which I omit in order to find room for some appropriate lines by Edward Everett, at one time American Minister in London:—

¹ The epitaph is copied from the Bologna (1656) edition of Galileo's Works. Cf. Nelli, *Vita di Galileo*, Vol. II, p. 853, and Venturi, *Memorie e Lettere*, Part II, p. 325. As Nelli says, the good father shows great courage in placing such a memorial—the first of its kind—on the wall of a chapel (even though it was an out-lying one) of the convent in which the Chief Inquisitor of Tuscany was residing at the time.

“And thou, illustrious sage! thine eye is closed,
To which their secret paths new stars exposed,
Haply thy spirit in some higher sphere
Soars with the motions which it measured here,
Soft be thy slumbers, Seer, for thanks to thee
The earth now turns without a heresy.
Dost thou, whose keen perception pierced the cause
Which gives the pendulum its mystic laws,
Now trace each orb with telescopic eyes,
And solve the eternal clock-work of the skies;
While thy worn frame enjoys its long repose,
And Santa Croce heals Arcetri’s woes.”

Everett : Santa Croce.

II.

TRIBUNA DI GALILEO, FLORENCE,
BY G. MARTELLI, 1841.

To my mind the Tribuna di Galileo is one of the noblest, certainly, the most evocative and inspiring monument ever raised to the memory of mortal man. Those who enter this little temple in a proper spirit and ponder over its contents and the lessons they teach, surely, will not depart without new conceptions as to the value of life—perhaps, with new resolves to do something (however little) to make the world around them better than they found it.

Lives of great men all remind us
We can make our own sublime,
And, departing, leave behind us
Footprints on the sands of time.

If an intense desire of being useful to mankind is everywhere worthy of honour; if its value is increased when united to genius of the highest order; if we feel for one who, notwithstanding such titles to regard, is harassed by cruel persecution; then none deserves our sympathy, our admiration, and our gratitude, more than Galileo. It is in this spirit that I now take up the role of *Cicerone*.

On the occasion of the third congress of scientific men of Italy, held in Florence in 1841, the Tribuna di Galileo was opened by Leopoldo II, the last Grand Duke of Tuscany. It is on the first floor of the Museum of Physics and Natural History, a building which the scientific visitor to Florence should not fail to explore; for, besides the exquisite temple of Galileo, it contains a vast collection of scientific apparatus of all kinds, for the most part the remains of the famous but short-lived Accademia del Cimento. Soon after Galileo's death in 1642, three of his latest disciples, Torricelli, Viviani, and Aggiunti, resolved to establish in Florence a philosophical society in memory of the Master, and to carry on his method of investigating truth by experiment alone. Their motto was:

Provando e Reprovando,
the membership was to be unlimited, and the only condition of entry was the negation of all faith, and a total disregard of established vows of philosophy of every kind and sect. Torricelli and Aggiunti died before the project got very far, but Viviani alone carried it to completion with the wholehearted co-operation of Leopoldo de Medici. On June 19th, 1657, the Accademia del Cimento was inaugurated under the special patronage of the Grand Duke, Ferdinando II, and under the active direction of his brother, Leopoldo. The first meetings were held in the apartments of that prince, when, according to Tiraboschi, his Highness and family mingled as equals with the humblest members, and took part freely in all the discussions. Unfortunately, for the

further progress of science in Italy, the Academy lasted but ten years in vigour. Then, its leading spirit, Prince Leopoldo, was created Cardinal (1667), was called to Rome, and, of course, ceased his scientific activities. Other leading members died or scattered, so that in a very few years the society died of inanition. It has, however, left an ample record of its labours in a volume of reports of all the experiments made year by year by the members. These included, amongst many others, experiments on the incompressibility of water; on universal gravity of bodies; on the property of the magnet, and of amber and other electrical bodies; on the motion of projectiles; on atmospheric pressure; on the nature of ice; on light; and on heat and cold, etc.¹

To return from this digression. An extract from the official Guide will explain sufficiently the design of the Tribuna:—

“The temple being dedicated to the memory of the great Galileo, the father of experimental philosophy, and being destined to preserve the scientific instruments, etc.—the products of his genius, and of his school, it was desired that it should be, at the same time, commemorative of the most famous epoch of Tuscan philosophy, and of the men who made it famous. And, in order to preserve the distinctively national character of the work, it was decided that only Tuscan artificers and Tuscan materials should be employed in the building and decorating. Thus the architect, Giuseppe Martelli, was Tuscan, and the artificers, the painters, and the sculptors were all Tuscan.”²

The building, which is said to have cost £40,000, consists of (1) a vestibule, which is lighted on the left by a fine stained-glass

¹ *Saggi di Naturali Esperienze fatte nell'Accademia del Cimento* . . . descritte dal Segretario, Lorenzo Magalotti, Firenze, 1667. This interesting volume has been reprinted frequently in Italy, and an English edition, translated by Walker, was published *circa* 1750.

² *Guide de la Tribune de Galilée*, Florence, 1843. It was reprinted in 1861, and has long been out of print.

window, and from which opens, on the right, (2) a small rectangular hall, which leads to (3) a smaller semi-circular tribune. The interiors are entirely lined with white marble, and profusely decorated with frescoes, medallions, busts, and drawings, carved in low-relief, and illustrative of the discoveries and inventions of Galileo and his immediate followers.

In the centre of the tribune stands the statue of Galileo by Professor Costoli; and in compartments of the domed ceiling above the statue are three frescoes, depicting three momentous periods of his life—the rising, the zenith, and the setting of his genius. In the first, on our left hand side, the young student is watching intently a swinging lamp in the Cathedral of Pisa. This led to his discovery of the synchronism of pendulum oscillations, and, ultimately, to his design for a pendulum clock. In the second, he is presenting his newly invented telescope to the Doge of Venice, which he did, actually, on August 24th, 1609, and for which he was then and there confirmed for life in his professorship in the University of Padua, and with his salary doubled. In the third, old and blind, he is seated at a table, with left hand on a globe, communicating to Torricelli and Viviani his last ideas on the Laws of Motion—the greatest achievement of a life abounding in discoveries of the first order. As Lagrange says:—“Today his work in mechanics forms the most solid and the most real part of the glory of this great man. The discovery of Jupiter’s satellites, of the phases of Venus, of the sun-spots, etc., required only a telescope and assiduity, but it required an extraordinary genius to unravel the laws of nature in phenomena which one has always under the eye, but the explanation of which, nevertheless, had always baffled the researches of philosophers” (“*Mécanique Analytique*”).

The engravings after these pictures are inscribed: L. Sabatelli dip. Turchi dis. P. Lasinio inc.

In the semi-circular wall of the tribune are six niches; the first, second, fifth, and sixth contain busts of Castelli and Cavalieri, Torricelli and Viviani, the two first and the two last disciples of Galileo. In the third niche one sees, through a glass frame, two of Galileo's later telescopes and, below, the object glass of *the* telescope with which he made all his astronomical discoveries. In the fourth niche, also glass-covered, are seen (1) his geometrical and military compass, invented about 1596, while professor in Padua, (2) a loadstone, armed according to his method, and bearing a weight of about 10 lbs. of iron in the form of a tomb—a form which was, probably, suggested by the legend of Mohammed's coffin suspended in the air by loadstones.

Galileo was very successful in fashioning these Natural Magnets, as they are now called. His method consisted in breaking up large stones, shaping the best pieces so as to bring out their maximum of polarity, and providing them with suitable armatures of soft iron, with the result that the portative force of the selected pieces far exceeded all previous achievements. Thus, the great magnetician William Gilbert of Colchester speaks of a stone (weight not given) which normally could sustain 4 oz. of iron, but which, when capped with steel, could support 12 oz. "But," he goes on, "the greatest force of a combining, or, rather, of a united, nature is seen when two stones, armed with iron caps, are so joined by their concurrent (commonly called contrary) ends that they mutually attract and raise one another. In this way a weight of 20 oz. of iron is raised, whereas either stone unarmed would allure only 4 oz."¹

Galileo went far beyond this, since he was able to fashion small stones of extraordinary power. Of such a one is the stone before us, and of which he speaks in a letter to his friend, Cesare Marsili, dated June 27th, 1626. It weighed 6 oz., and unarmed

¹ "De Magnete," London, 1600, Chap. XVII, Book II.

PLATE XLI.



Inclined Plane Experiment. Fresco in Tribuna di Galileo.
From an old engraving.
(See page 149).



Cippo, on the Pincio, Rome, near the
Villa de Medici.
(See page 151).

PLATE XLII.



Proposed Entrance to Campanile, Venice, in Memory of Galileo.
From the lithograph by Draghi, after G. Pividor.

(See page 152).

could support only 2 oz., but when armed it was able to sustain 150 oz. or twenty-five times its own weight. He had this stone by him when writing his Dialogue of 1632, but, later, he presented it to the Grand Duke of Tuscany, Ferdinando II, (3) the index finger of Galileo's left hand. This, with the thumb and forefinger of the right hand, was filched from the body at the time of its exhumation and reburial in Santa Croce (p. 143 supra).

In lunettes above the walls of the vestibule and central hall are four large frescoes. One, which faces the visitor on entering the temple, shows Leonardo da Vinci in presence of Lodovico Sforza, Duke of Milan, to whom he is enumerating his various inventions. In the opposite lunette, Volta is explaining his electric pile to the members of the French Institute, Napoleon and Lagrange being prominent amongst the spectators. The corresponding frescoes in the central hall represent (1) Galileo in Pisa, proving the law of descent of falling bodies by experiments on an inclined plane; and (2) Viviani, Borelli, and Redi, showing to the Grand Duke the apparent (but to them real) reflection of cold by a parabolic mirror. A block of ice is used as the source of cold, and this "cold" is reflected by a mirror towards a thermometer placed in its focus. Viviani is shown in the act of screening the mirror, and two of his friends are noting the effect on the thermometer. In the centre of the Galileo picture one sees an inclined plane down which a marble is rolling, while Galileo, standing by, is explaining the effect to two of the spectators. On the left, seated, are Don Giovanni de Medici, a jealous opponent of Galileo, and his *soi-disant* rival in mechanical science, and the Head of the Pisa University, both looking very displeased. On the right are two Peripatetics, bent over a large open book on a table, seeking anxiously for some passage in Aristotle in disproof of Galileo's argument. On the table beside them are books and a globe, while an armillary sphere and other books are on the floor,

near Don Giovanni's feet. In the background are the Baptistery, the Cathedral, and the Leaning Tower. The engraving after this picture is inscribed Bazzuoli dip. Turchi dis. Lasinio inc.¹

On the pilasters are fourteen white marble medallions of members of the Accademia del Cimento, and other distinguished Italian scientists, and on pedestals in the vestibule are busts of the Grand Duke, Ferdinando II, of Prince Leopoldo, his brother, of Grand Duke Pietro Leopoldo I, founder of the Museum of Physics and Natural History, and of Grand Duke Leopoldo II, under whose auspices the temple was erected. Scattered over the vaulted roofs or ceilings are ten small paintings, emblematic of nature, truth, perseverance, physics, philosophy, astronomy, geometry, mathematics, hydraulics, and mechanics.

On the floor of the hall, on stands, are four instruments of great size: a brass astrolabe, an odometer or distance-measurer, a movable dial by Rinaldini, mounted in walnut, with a Tychonic scale in brass, and the great crystal lens of Bregans of Dresden, with which Averani and Targioni-Tozzetti, and, many years later, our own Sir Humphrey Davy, made experiments on the combustion of the diamond and other precious stones. Finally, in large glass cases, lining the walls of the hall and vestibule, are preserved the most interesting specimens of the instruments, etc., belonging to the Accademia del Cimento, such as thermometers, barometers, hygrometers, gravity meters, globes for experiments on the compressibility of water, telescopes by Torricelli, Viviani, and other early Italian makers, and collections of chemical (fine specimens of Florentine glass-work), physical, astronomical, and other apparatus.

¹ Giovanni Rosini: "Descrizione della Tribuna Alla Memoria del Galileo," Firenze, 1841.

III.

GALILEO IN GARDEN DECORATIONS,
1845.

Favaro has a note to the effect that, about 1845, the proprietor of the Villa Puccini, near Pistoia, decorated his villa by the erection of what he called *Emiciclo di Galileo*, and by other memorials of him, such as views of the interior of the newly erected *Tribuna di Galileo* in Florence. There was also an epigraph as follows :—

Galileo
Che Piu' D'Ogni Altro Dotasti Il Mondo
Di Nobilissimi E Fecondi Veri,
E Piu' D'Ogni Altro Per Amor Del Vero
Dall'Ignoranza E Dall'Invidia Patisti,
Finirà La Tua Gloria
Quando Il Genere Umano
Cessi Di Vedere Il Sole Ed Abitare La Terra.

IV.

CIPPO AL PINCIO, ROME.
1883.

About 1882, the Municipality of Rome wished to affix to the wall of the Villa Medici (now the Academy for French art-students) a tablet to commemorate the fact that Galileo was a prisoner there “*d'aver visto la terra volgersi intorno al sole.*” The French authorities refused consent, so the Municipality erected, in 1883, a half-column, or Cippo, close by, on the roadway leading into the Pincio Gardens. It is surmounted by an iron globe, or rather, an armillary sphere, and bears this inscription—

Il Prossimo Palazzo
 Già Dei Medici
 Fu Prigione A Galileo Galilei
 Reo D'Aver Veduto
 La Terra Volgersi Intorno Al Sole
 S.P.Q.R.
 M.DCCCLXXXIII.

V.

PROJECTED MEMORIALS (3) OF GALILEO IN 1870, 1899, 1922.

1. In 1870, G. Pividor first proposed the laudable design of placing some memorial of Galileo on the Campanile of Venice, from the top of which he exhibited his first telescope in August, 1609.

After the fall of that famous pile on July 14th, 1902, the proposal was brought up again in connection with the plans for reconstruction, but it failed to find acceptance. As, however, we think it deserves to be recorded in a work devoted to memorials of Galileo, we reproduce it from a lithograph by Draghi.

For the same reason, we may record here two other projects for the erection of statues by public subscription, one in France, and the other in Italy.

2. The Paris design dates back to the close of the last century, for we find it referred to in the "Nuova Antologia" of July 16th, 1900. It appears that at a meeting of the Paris Municipal Council, on March 23rd, 1900, a report by M. Vorbe was read, and, thereupon, a sum of 30,000 francs was voted as a contribution towards an International Fund. There was to be a Committee composed of representatives of scientific societies, French and Foreign, and

of delegates from all teaching institutions of all grades and denominations—per condurre a fine l'opera di glorificazione delle scienza, di concordia, e di pace. The Committee was to be under the honorary presidency of an Italian and a French scientist, and, over all, the President of the Paris Municipal Council. The Great War and its political and financial sequalæ have interfered with this noble project, but let us hope that it will be revived in happier days—"di concordia e di pace."

3. Not content with Demi's colossal statue in their University, the Pisans have been clamouring for many years for a monument worthy of their famous townsman, to be erected in some public place and by public subscription. But again the war and its financial stresses had caused the project to be laid aside. Now the agitation has been resumed, and seems likely to lead to results in the near future. A telegram in "The Times" of May 10th, 1922, explains the situation—

Milan, May 8th.

"The question of erecting at Pisa a suitable monument in honour of Galileo, a native of the town, has for many years exercised the minds of the local authorities. Owing, however, to their rather modest financial resources, the administration has never been able to vote a sufficiently large sum of money to cover the cost of such a memorial as would do full honour to the memory of their world-famous citizen.

"Recently Cardinal Maffi, Archbishop of Pisa, has offered to provide the necessary funds. The Municipal Council, however, while thanking the Cardinal for his generous offer, consider they must decline it, because they feel that it rests with the town, and not with an individual, to honour its illustrious son. Now, however, the question will be decided. A fund is being devoted

¹ Il Monumento di Galileo a Parigi, in "Nuova Antologia," July 16th, 1900, p. 211.

towards the cost of the undertaking, and a public subscription is being opened, to which the leading personages of the city, including Cardinal Maffi himself, will contribute. An enormous crowd was present on Saturday at the meeting of the Council which decided whether to accept or refuse the offer of the Cardinal."

VI.

MURAL INSCRIPTIONS ON VIVIANI'S HOUSE IN FLORENCE, 1693.

It had always been Viviani's desire to raise a grand monument in Santa Croce to the memory of his revered master; but, as we have seen in Sec. I., this was not possible for many years, owing to opposition from Rome. Meanwhile, he sought other ways. He prompted the publication in Bologna (1655) of an edition of Galileo's chief works, and supplied the editor with much material hitherto unpublished; but the result in two volumes quarto was disappointing. They contained little more than a reprint of pieces already published separately, and even of these, there were two notable omissions, namely, the polemical letter of 1615 to the Grand Duchess Cristina, and the "Dialogo" of 1632, which brought upon Galileo the thunders of Rome.

Viviani then had the idea of doing the work himself. He drew up a grand scheme, collected and arranged his materials, and was so confident of accomplishing the task, that he sought and obtained permission to dedicate the work to the King of France; but for various reasons, ill-health and ecclesiastical opposition amongst them, he never got so far as the printing stage.

Then he went back to the original design of a tomb in Santa Croce, where he would gather the Master's ashes, and reserve a

space for his own. As to this, he had to be content with leaving in his will a sum sufficient to defray the cost, *when* the times were more propitious.

Meanwhile, greatly daring, he resolved to do something, and, in 1693, he formed the front of his house in Florence (Via San Antonino) into a mural monument.

Over the entrance door is a bronze bust of Galileo, cast by Foggini from a mould of the Caccini bust of 1612, and inscribed as follows :

Galilaeus Lynceus, Aetatis Annorum Iil, Quem/ Astra Mare Ac
Terras Complexum Mente Profunda/ Credibile in Solo Cernere
Cuncta Deo/

On each side is a large sculptured plaque. That on our left is inscribed :

Este Duces, od, si qua via est,¹ and shows a man at sea, sitting in the stern of a boat, and observing Jupiter's satellites through a telescope—in allusion to Galileo's efforts to utilise the motions of these satellites for determining the longitude at sea. The observer is sitting in a chair of Galileo's design, suspended à la binnacle, so as to secure steadiness.

The plaque on our right is inscribed :

In Sole, Quis Credat ? Retectas
Arte Tua, Galilaeo, Labes²

and shows the same figure observing the sun-spots. Opposite, is another figure observing the curve described by a ball fired from a cannon; and between them is a heavy beam supported at one end, and breaking by its own weight. These refer to Galileo's

¹ Virgil : " Aeneid," lib. VI.

² Urbano VIII, Pont. Max.

demonstrations on projectile motion, and on the strength of beams.

On both sides of the door are large marble slabs, on which are carved, in Latin, eulogies of the Master, and references to his principal works—in short, an epitome of the life of Galileo, or, as Disraeli calls it “a singular monument of gratitude and a most beautiful biography of genius” (“Curiosities of Literature”—On Literary Residences).¹

VII.

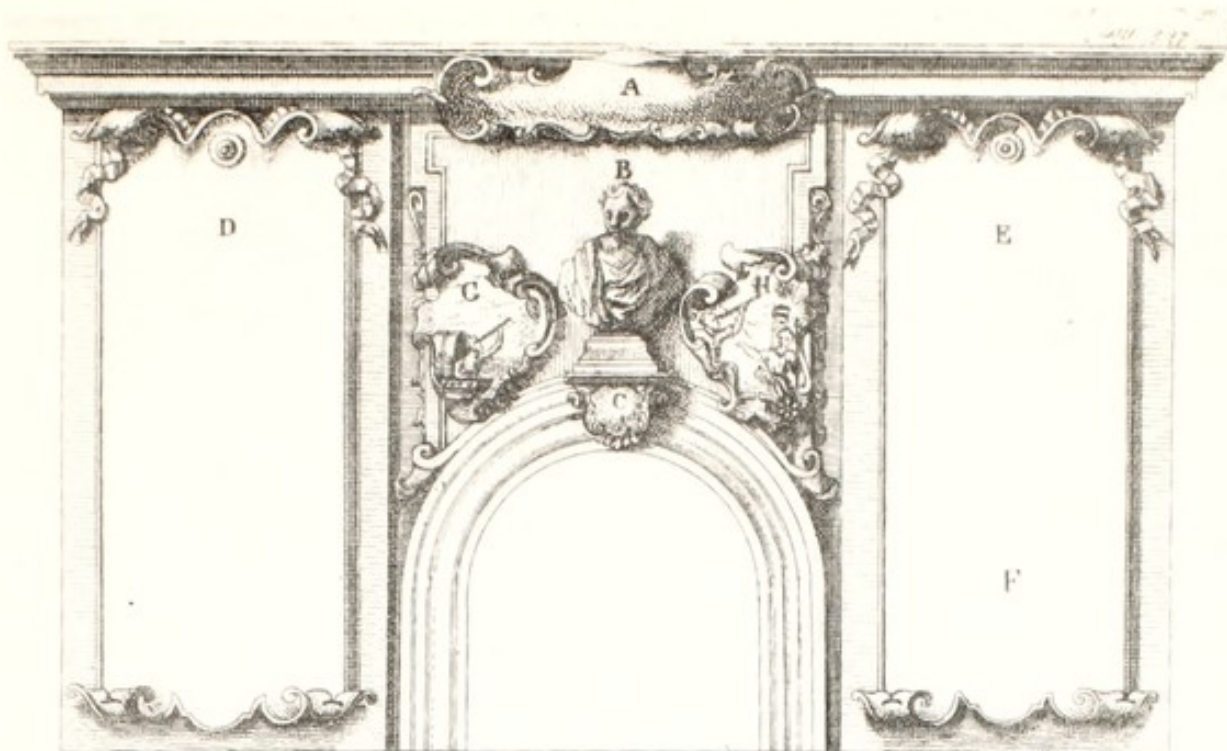
BUST AND INSCRIPTION, BELLOSGUARDO, 1835.

Between the years 1617 and 1631, Galileo occupied a villa at Bellosguardo, outside Florence. Later, it was tenanted for some years by Ugo Foscolo, who records the fact in his Ode to The Graces (*Le Grazie*):—

Qui dov'io canto, Galileo sedea
 a spiar l'astro
 Della loro regina

On the inner wall of the verandah is a marble bust of Galileo, executed in 1835 by Demi (according to Albéri), or by Costoli (according to Favaro). Underneath is the following inscription, composed by Vincenzo Antinori, Director of the Museum of Natural History, Florence:—

¹ For these inscriptions, see Nelli's “Vita e Commercio Letterario di Galileo,” Losanna, 1793, pp. 856-67.



*Memorie consacrate
alla memoria del Galileo* da Vincenzo Viviani

Bust and Mural Inscriptions on front of Viviani's House, Florence.
From an old engraving.

(See page 155).

PLATE XLIV.



Galileo's House in Bellosguardo, 1617 to 1631
(See page 156).

A
 Galileo Galilei
 Nelle Maraviglie Del Creato
 Luce Degli Intelletti
 Padre Della Filosofia Sperimentale
 Legislatore Del Moto
 Di Nuovi Mundi
 Già per Distanza o Piccolezza Celati
 Ritrovatore
 Che
 In Questa Villa Dal 1617 Al 1631
 Di Frequente Abitando
 L'Aureo Saggiatore
 Dettava
 Dell' Universo per Le Sue Scoperte Dilatato
 Il Sistema Illustrava
 Ond' Ebbe Da' Contemporanei Cui Dava Libertà Di Pensiero
 Schiavitu Di Persona
 Che Talora A Solievo Dell' Operosa Mente
 La Contigua Terra Coltivo Di Sua Mano
 Amerigo Degli Albizi
 A Venerazione Dell Sommo Cittadino
 L'anno MDCCCXXXV.
 P.Q.M.

"From Tûscan Bellosguardo,
 Where Galileo stood at nights to take
 The vision of the stars, we have found it hard,
 Gazing upon the earth and heavens, to make
 A choice of beauty."

Eliz. B. Browning.

VIII.

BUST, 1843, AND INSCRIPTION, 1788, IL GIOIELLO, ARCETRI.

In November 1631, Galileo moved into the Villa Il Gioiello in the little village of Arcetri, in order to be near his two daughters, nuns in the neighbouring convent of San Matteo. With increasing years and infirmities, he found that Bellosguardo was too far for his frequent visits to the convent, especially after the loss of his old and trusty mule. He occupied this house until his death on January 8th, 1642; and here he was visited by great men from far and near. Thomas Hobbes of Malmsbury was here *circa* 1635-36, and Milton in 1638. Indeed, Descartes would seem to be the only great man, who, finding himself in Florence, did not call on Galileo. Arago tells us that during his wanderings Descartes visited parts of Italy and returned to France, passing through Florence. "One would be astonished," he goes on, "to learn that he had no wish to be presented to Galileo, did we not know that by an inexplicable aberration he was always indifferent to the works and admirable discoveries of the Italian philosopher."

"Nearer we hail
Thy sunny slope, Arcetri, sung of Old
For its green wine; dearer to me, to most,
As dwelt on by that great Astronomer,
Seven years a prisoner at the city-gate,
Let in but in his grave-clothes. Sacred be
His villa (justly was it called The Gem)
Sacred the lawn, where many a cypress threw
Its length of shadow, while he watched the stars!
Sacred the vineyard, where, while yet his sight

Glimmered, at blush of morn he dressed his vines,
 Chanting aloud in gaiety of heart
 Some verse of Ariosto!¹

On the outer wall of the villa, abutting the public road, Nelli, in 1788, put up a marble slab bearing the following inscription—

ΣΥΝ ΘΕΩ

Aedes Quas Viator Intueris Licet Exiguas
 Divinus Galilaeus
 Coeli Maximus Spectator
 Et Naturalis Philosophiae Restitutor
 Seu Potius Parens
 Pseudosophorum Malis Artibus Coactus
 Incoluit ab Anno MDCXXXI Kal. Novembris
 Ad Annum MDCXLII Vi Idus Januarii
 Heic Naturae Concessit
 Loci Genium Sanctum Venerare et Titulum
 Ab Jo : Baptista Clemente Nellio
 Stephaniani Ordinis Equite
 Senatore Ac Patricis Florentino
 Aeternitati Dicatum Auspice
 Antonio Bonaiuti : Fundi Domino Annuente.

¹ Rogers: *Italy* (Campagna of Florence). In the opening lines of this poem he makes the mistake of saying:—

. . . from the top of Fiesole,
 Whence Galileo's glass by night observed
 The phases of the moon. . . .

It may be noted that Milton commits the same blunder and in almost identical words:—

. . . The moon whose orb
 Through optic glass the Tuscan artist views
 At evening from the top of Fesole.

Paradise Lost, I, 257.

Fiesole is miles away from Arcetri, and on the opposite or north side of Florence.

The bust which now surmounts the inscription was added in 1843 by the then proprietor, Anton Filippo Marchioni. It is inscribed:—

Questa Effigie Del Divino Galileo
Fece Porre Nel MDCCCXLIII
Antonfilippo Marchioni.

IX.

BUST AND INSCRIPTION, VIA DELLA COSTA, FLORENCE.

On the marriage of his son, Vincenzo, on January 29th, 1629, Galileo bought this little house for him, and occasionally occupied a room himself, when a visit to the Doctor, or other business, necessitated his presence in Florence. On some of these occasions the Grand Duke would see him and help to prepare his medicines. These visits are recorded on a marble slab over the entrance door:—

Qui Ove Abitò Galileo
Non Sdegnò Piegarsi Alla Potenza Del Genio
La Maestà Di Ferdinando II
Dei Medici.

The bust in plaster over the inscription is the work of a modern decorator.

Mrs. Gordon in her "Life of Sir David Brewster" (p. 281) wrongly places this inscription on the wall of Galileo's house in Arcetri, and, moreover, has made four serious errors in transcribing the second line thus:—

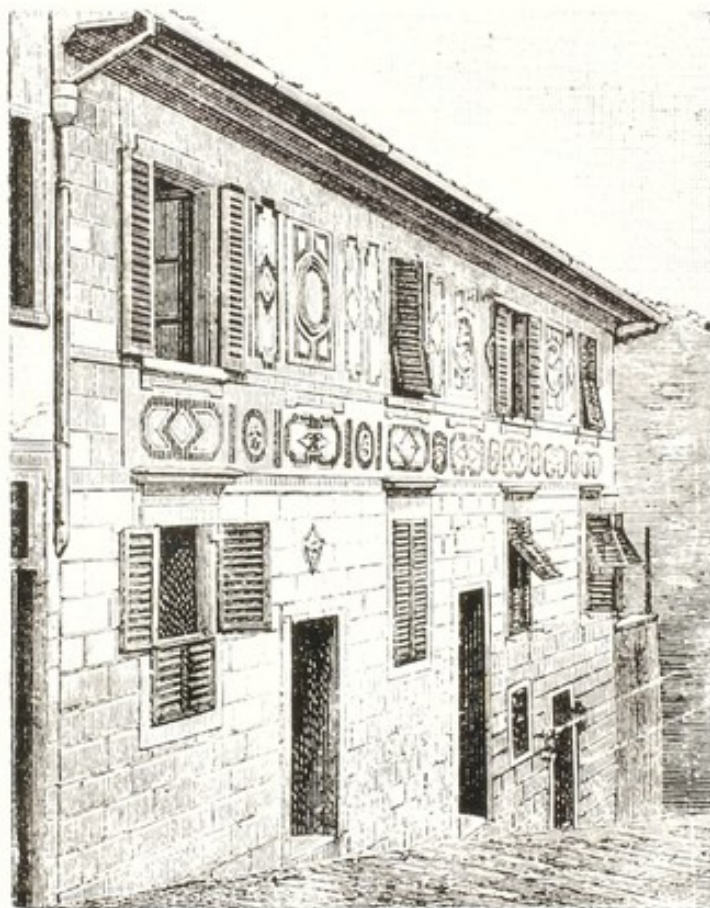
Novi solegno Pregarsti Aller Potenza del Genio

It was here that the Dutch merchants presented to Galileo the letter and gold chain on behalf of the States General of Holland, as related on p. 93 supra.



Galileo's House (Il Gioiello) in Arcetri, 1631 to 1642.
From a lithograph by Long, after Turner.
(See page 158).

PLATE XLVI.



Casa di Galileo in Firenze.

Galileo's Cottage, Via della Costa, Florence.
(See page 160).

X

BUST AND INSCRIPTION, DOGE'S PALACE, VENICE.

On the occasion of the Congress of Italian Scientists held in Venice in 1847, a commemorative marble bust by Luigi Ferrari was placed on the wall of the inner balcony (first floor) of the Doge's Palace. Underneath is a slab inscribed:—

A Galileo Galilei
Auspice Dei Congressi
Italiani.

And here in the Panteone Veneto, we leave our philosopher, in the midst of scenes that he loved so well in the glorious days of Padua, and surrounded by an excellent company of kindred spirits, some of whom were personal friends in the flesh. On his right is Fra Mauro of Venice, a geographer of the 15th century, whose famous Map of the World (1460) is still preserved in the library of his monastery on the island of San Micheli, near Venice. "It is there seen," says Valery, "that this cloistered d'Anville of the XV century was acquainted with all that the ancient and modern authors had written on geography. The Cape of Good Hope is shown, although it was not then discovered, and Africa, in its general outline, differs but little from the reality" ("Travels in Italy," 1852, p. 157). On his left Galileo has the bust of Giovanni Cabot, who, sailing from England with his son, Sebastian, discovered the mainland of America in 1497; and close by is Fra Paolo Sarpi, a personal friend, and known to all the world as the author of "The History of the Council of Trent," 1619.

APPENDIX

SPURIOUS GALILEOS.

Besides the two frauds of the less harmful order mentioned in the body of this work, namely Rossi's "Guido Reni," p. 38 and Cipriani's "Columbus," p. 89, I have met with several others of a more reprehensible kind, which may be referred to here at some length, if only as a warning to intending collectors.

I.

GERARD DOU'S EIN GELEHRTER JUDE AS A GALILEO.

In 1912, there fell into the hands of the late Professor Favaro a little French volume, which, for a moment, brought to light again the first and oldest of our Galileian frauds, the origin and meaning of which it is now difficult to guess. But first let us hear Favaro—"We cannot leave this part of our inquiry without an expression of gratitude for the amusement given us by Sig: Pierre Aubanel, Avocat à la Cour de Paris, in his little book 'Galilée et l'Eglise: l'Histoire et le Roman,' Avignon, 1910. Particularly are we taken by his frontispiece—a portrait of Galileo—tiré (as its inscription tells us) du Cabinet de M. le Comte de Baudouin, Brigadier des Armées du Roi, Capitaine des Gardes Françaises, and for which, it appears, we should be grateful to his compatriot, M. le Chanoine Aubéry—C'est à son amour bien connu de tout ce qui touche aux lettres, et à son extrême courtoisie, que mes lecteurs sont redevables du beau portrait placé en tête

de ce volume. Well, as to this beau portrait, it is a grotesque fraud, and shows that neither the avocat Aubanel, nor the chanoine Aubéry, had ever seen a portrait of Galileo, good or bad. In fact, here one sees a gross head covered by a large feathery turban, whether Indian or Persian I cannot say, but certainly of an extravagant oriental kind. This thick head is set on a taurine neck; the eyes are protruding, and the upper lip is covered with a close-cut moustache alla moda Anglo-Americana of today. Whoever is intended, whether Averroë or Avicenna, wears an elaborately worked and fringed neck cloth, and a body garment ornate with frills and furs and buttons and flowing sleeves, terminating in closer fitting cuffs; and, over all, a loose flowing mantle, gathered up over the knees. This ridiculous figure is seated at a table, holds open a large volume with the left hand, and is turning over the leaf with his right. The open leaves show writing in double columns, and there is some kind of diagram or illustration in one corner. The text shows as little acquaintance with Galileo's writings as does the frontispiece with his personality. His celebrated 'Dialogo' of 1632 is spoken of in a way which shows that, if M. Aubanel ever saw the book, he certainly never read it or tried to understand it. He dares to say of it that 'il est oublié aujourd' hui'!, and that 'Galilée lui-même est peu connu'!! ('Atti del Reale Istituto Veneto,' 1912-13).

In time a clue to this mystery fell into Favaro's hands. By the merest chance he was turning over the sheets of a Vienna Art-Kalendar for 1906, when he lighted on the leaf for September 3rd, containing the portrait of a man identical with Aubanel's pretended Galileo, but very differently inscribed—Ein Gelehrter Jude. Von Gerard Dou (1613-1675). Kaiserl. Galerie, St. Petersburg. About the same time I found in England three engravings which carried our quest a step further by showing

whence came the Aubanel frontispiece. Two of these are identical with the Aubanel picture, but give in addition the names of painter, engraver, and publisher as follows:—Gerard d'Ou pinx. R. Gaillard sculp. A Paris et à Londres chez Tessari et Co. The third, of inferior execution, is inscribed Gerardow pinxt. Delaruelle sculp. Galilée.¹ Here the face is to left, while in the two Gaillard engravings and their derivative, the Aubanel frontispiece, it is to right. Our next and final step settled this point; a photograph of the original now in St. Petersburg was easily procurable from the Collection Hanfstaengl, München, and shows the face to left, as in Delaruelle's engraving. The Gaillard engravings, therefore, are reversed.

The remaining question, when and why came this fraud to be perpetrated, I fear, is now unsolvable. M. Aubanel but revived it for a moment in 1910, and we may acquit him of anything worse than *gaucherie*, which is sufficiently accounted for by his ignorance of Galileian iconography, and a too great zeal for the ecclesiastical side of his argument. But we cannot be far out if we take back the origin to somewhere about the middle of the 18th century—the riotous period of French engraving. This was a time when all kinds of *diablerie* in art were practised and ran their brief courses; and, as we should remember, it followed the still more frenzied years of juggling in French finance, culminating in Law's Mississippi Bubble (1717-20). In such conditions and in such an atmosphere people's motives and actions are not ruled by common sense or logic. Gaillard was then in his prime as a popular engraver in Paris, Delaruelle was his contemporary, and the Cabinet of M. de Baudouin was there, and, doubtless, many others, from which enterprising engravers could draw their inspirations. We need not then be surprised if one

¹ This and one of the two Gaillard's mentioned in the text are to be seen in the Hope Collection, Oxford.

day Gerard Dou's Gelehrter Jude were engraved and placed on a greedy market as a hitherto unknown portrait of Galileo—tiré du Cabinet de M. le Comte, etc., etc.

II.

WYATT'S ASTRONOMER AS A GALILEO.

In 1851, Messrs. Vertue and Co., London, published a splendid work illustrative of British art, entitled "Vernon Gallery of British Art," edited by S. C. Hall, F.S.A., 152 engravings on steel, 4 vols., folio.

In Part XXV, Plate X, is a picture called *The Astronomer*. He is seated by a table, on which lies a large open volume of astronomical designs. The right elbow rests on the book, and in the right hand he holds an open divider. Beside the table is a large terrestrial globe, on which are areas marked Russia, Tartaria, Moscovia. In the accompanying letterpress the editor says:—"The original painting by Wyatt was exhibited at the British Institution about fifteen years ago under the name of *The Philosopher*. I prefer to give it another name more suitable to the composition, and here I call it *The Astronomer*." The original is now in the Tate Gallery, London. The engraving is inscribed H. Wyatt, Painter. R. Bell, Engraver.

I find that this engraving was reproduced in "*The Eclectic Magazine*," New York, 1852, as frontispiece to the June number, and is there inscribed Original by H. Wyatt. Galileo. Engraved by Samuel Sartain for "*The Eclectic Magazine*." Besides changing the title from *The Astronomer* to *Galileo*, the globe is here darkly shaded, and shows no markings, perhaps, because they would be out of keeping with the new title.

Loose copies of Bell's engraving are often procurable in the market, and sometimes the word Galileo is written in pencil above or below the printed title. Many years ago, I bought such a print in the Charing Cross Road, and on my expressing doubt as to the correctness of the pencilled name, seeing that the picture in no way resembled Galileo, the dealer replied, "Yes, Sir, engravers sometimes do take strange liberties with their originals." "Yes, and so do dealers sometimes," would have been a fair rejoinder in this particular case, but I refrained.

III.

JACOPO BASSANO'S EFFIGIES INCOGNITA AS A GALILEO.

In 1879-80, there appeared in London, in six large quarto volumes, "Portraits of the one hundred Greatest Men of History," reproduced from fine and rare steel-engravings, edited by Wallace Wood, M.D., and published by Sampson Low, Marston, Searle, and Rivington. Volumes 1 to 5 are given to Literature, Art, Religion, Philosophy, and History respectively. Volume 6 is devoted to Science, and contains portraits of Hippocrates, Archimedes, Galen, Copernicus, Kepler, Galileo, Harvey, Newton, Linnaeus, Lavoisier, Bichat, and Cuvier. Turning over the leaves of Volume 6 I found two portraits of Galileo. One was easily recognisable as a reproduction of Bettellini's engraving after Passignani, but on a reduced scale, the chair, hands, and telescope being cut away. The other portrait was protected by a flimsy sheet, on which was printed:—

Galileo. Old. As he appeared before the Inquisition.
For a moment I was elated, but—the print in no way bore the slightest resemblance to any portrait of Galileo from life that I

had seen; and, on turning to an Appendix, giving the sources of the various pictures, I found a partial explanation:—

(2) Galileo—Old:

Jac. Bassan, pinxit.

Dom. Cunego, sculpsit, Romae, 1769.

Londini, apud Gulielmum Beckfort.

A reference to the Bassano file in the Print Room (British Museum) completed the story of this stupid hoax. There I found a large engraving inscribed exactly as above, but with, in addition, the suppressed title—

Effigies Incognita.

The fact that Bassano died in 1592, or forty-one years before Galileo's encounter with the Inquisition, must have entered very soon the Editorial mind, for in the smaller one-volume edition of the same work, which appeared in 1885, the Bassano-Cunego print is *not* reproduced.

IV.

TORRIGLIA'S DEATH OF CHARLES V AS A GALILEO.

About 1889, a rising Italian artist, G. B. Torriglia, painted a death-bed scene, entitled *Gli Ultimi Momenti di Carlo V.* It represents the old monarch propped up in bed. A young man, Philip II, in large frilled collar and cuffs, is sitting uneasily at the foot of the bed; a hooded monk, with a rosary hanging from his girdle, is sitting at the head, and is talking to another monk who holds a Crucifix; other monkish figures are standing about—all awaiting anxiously the last moment. The picture is signed in the right-hand bottom corner, and very clearly, G. B. Torriglia.

A large engraving after it is now before me, inscribed G. B. Torriglia, dip. Stab. V. Turati, inc.

Gli Ultimi Momenti di Carlo V.

La Società Promotrice di Belle Arti in Genova

Ai suoi soci dell' Anno, 1889-90.

This engraving became very popular at once, and large numbers were printed and sold, or were distributed as prizes amongst art-students in Italy.

Yet it is a surprising fact that all recollection of this picture faded from the public mind so completely in two or three years that its reproduction as *La Morte di Galileo* by Niccolò Barabino was accepted as the last novelty in art, and was bought up by admirers of Galileo. Certainly, the time and circumstances were well chosen. Barabino had already produced and in quick succession two large Galileian pictures, which enjoyed great popularity. If two, why not a third of the same genre? Then, as to the time, it was most propitious. The tercentenary of Galileo's professorship in Padua, December 7th, 1592, was being celebrated with pomp and ceremony in that renowned seat of learning. It had its repercussions in all the other University centres of Italy — indeed, of all Europe, and articles, many profusely illustrated, were appearing in the newspapers and magazines. So, the fraud was launched, and Torriglia's Last Moments of Carlo V appeared as Barabino's Death of Galileo. A few years more, and the faked Barabino was as little remembered as the genuine Torriglia, so that I had some difficulty in convincing Favaro and others of its existence.¹

A copy of this imposition is also before me as I write. It is inscribed Fot. G. Svicher. Fotoincisione Fusetti, Milano.

La Morte di Galileo Galilei

N. Barabino.

¹ Cf. *Atti del Reale Istituto Veneto*, vol. 73, p. 123.

V.

PORTRAIT OF A NUN AS GALILEO'S DAUGHTER.

During my first visit to Florence in the winter of 1899-1900, I became interested in Galileiana, and collected a few books, prints, and photographs relating to the great Florentine, amongst them a large photograph of a nun inscribed:—

11409
Contorni di Firenze.

Villa Galletti,
Torre del Gallo.

Suor Celeste, figlia di Galileo.
Ignoto Autore.

I soon learnt that Galileo had two daughters, Virginia, born August 13th, 1600, and Livia, born August 18th, 1601, and one son, Vincenzo, born August 21st, 1606; that the girls became nuns in the Convent of San Matteo, Arcetri, at the earliest possible age; that the elder, Virginia, grew up to be a splendid character—the pride and consolation of her father in his declining years; that his long-drawn-out encounter with the Inquisition grieved her immeasurably; and that when at last, at the end of December 1633, she heard of his being allowed to return, *en parole*, to his villa in Arcetri (close to the Convent) she hardly had strength enough to be glad. Suor Maria Celeste died April 2nd, 1634; and in a letter to his Paris friend, Elia Diodati, dated July 25th following, Galileo says:—"Here, then, I was living, keeping perfectly quiet, and paying frequent visits to a neighbouring convent, where two daughters of mine were living as nuns. I was very fond of them, especially the elder, who possessed extraordinary mental gifts, combined with rare goodness of heart; and she was very much attached to me. During my absence, which she considered very perilous for me, she fell into a profound melancholy which undermined her health, and she was at last

attacked by a violent dysentery of which she died after six days' illness, just thirty-three years of age, leaving me in the deepest grief."

As I came to know all this, my veneration for the photograph increased, until, one day, having occasion to speak of it to my new master, Professor Favaro, he shocked me by saying:—"Never again let me hear of that thing. It is an impudent forgery—worse, it is a sacrilege."

VI.

RIBERA'S FILOSOFO AS A GALILEO.

Many years ago, July 30th, 1913, I received a letter from a gentleman who was then on a visit to England from his home in New Zealand. Here I quote it in full as a suitable introduction to what is to follow:—"It may interest you to hear that I have acquired a painting of Galileo by his contemporary Ribera (Spagnoletto). It is now lying at Messrs. — in Old Bond Street, who have had it cleaned for me, prior to my taking it out to New Zealand. It occurred to me that, perhaps, you might care to see it, or even to have it photographed, in case you issue a second edition of your book. I accordingly took the liberty of asking Messrs. — to give you access to the picture if you called. I rather think, from the point of view of a portrait, it is better than the two in Florence; but I shall be interested to hear your opinion." I took an early opportunity of seeing the picture, but the result was disappointing. It was clearly a fine painting, it

¹ For more about Maria Celeste, see (1) *The Private Life of Galileo*, London, Macmillan & Co., 1870—a charming book, published anonymously but known to be by Miss Mary Allen-Olney (died 1922). (2) *Galileo e Suor Maria Celeste*, per Antonio Favaro, Firenze, 1891, where Maria Celeste's letters to her father are given in full (124 in all).

may be by Ribera, but, certainly, it is not a portrait of Galileo. The canvas measured 29 in. high by 22½ in. wide, and on the back was pasted an old auctioneer's—or salesman's—tag, on which was printed "Filosofo Spagnoletto," meaning, perhaps, the title of the picture and the painter's name. On the old frame, in front, was pencilled Galileo. Of the picture itself I have now before me a good photograph made from the cleaned canvas. The composition is curious and suggestive of allegory. The figure is half-length, of natural size, and represents an elderly man, partly bald, wavy hair, long straggling white beard, and thick moustache. The right arm and hand do not appear. The left hand is resting on a large closed volume, and holds the upper two-thirds of a long quill pen, the lower one-third of which has broken off, and is lying across the book cover. The attitude, the wrinkled brow, the expression of the pensive face seem to suggest a pained perplexity—as if to say—my pen is broken—now I can write no more. If the figure be taken as representing Galileo, then the allegory may be explained thus. The closed volume is his *Dialogo* of 1632, which was condemned as heretical and placed on the Index, the broken pen in the left hand may refer to the edict of the Inquisition which followed his condemnation and which prohibited his further writing and the publication of any of his works, *edita et edenda*. We know how he resented this savage edict of perpetual silence, and in one of his moments of bitterness, he wrote to his daughter, the saintly nun of San Matteo:—"My name is erased from the book of the living."

As to the history of the picture, it is brief and for our purpose, for any purpose, worthless. My New Zealand friend first saw it by chance in a dealer's shop in the West of England, who assured him that it was a Galileo by Ribera; that it had been in his possession for five years; that he then acquired it with many other miscellaneous items for a lump sum at the break-up of Lord

Scarsdale's home in the south of France; and that it had been in the Curzon family for over one hundred years. Now, on the face of it, this is a stupid tale. Would any intelligent man keep a Galileo by Ribera one hundred years and then let it go in a jumble sale? Would the lucky dealer, who acquired it in this cheap and easy way, keep it on sale in his provincial shop for five years, while any day he could sell it in a London auction-room for good and ready cash? At that moment I had an opportunity of submitting the question to the late Lord Curzon. His reply is decisive:—"My father never had a house in the South of France. Neither he nor, so far as I know, any of his predecessors ever possessed a picture by Ribera, or of Galileo. The collection made by the first Lord Scarsdale in 1760-1770 still remains intact, and contains no such painting as that referred to." On communicating to my friend my final conclusions he says, writing from his home in far-away New Plymouth, New Zealand:—"My 'Galileo' looks very handsome on my dining-room wall, and brings back recollections of a pleasant meeting with yourself. Often, too, I marvel at my vendor's power of imagination!"¹

¹ For others of Ribera's "Philosopher" pictures, see p. 53 *supra*.

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