

The Open Court

A MONTHLY MAGAZINE

Devoted to the Science of Religion, the Religion of Science, and the
Extension of the Religious Parliament Idea

Editor: DR. PAUL CARUS.

Associates: { E. C. HEGELER.
MARY CARUS.

VOL. XXII. (No. 1.) JANUARY, 1908.

NO. 620.

CONTENTS:

	PAGE
Frontispiece. The Trial of Galileo Galilei.	
Galileo Galilei. EDITOR.	1
The Present Religious Crisis. As Reviewed by COUNT GOBLET D'ALVIELLA...	14
The Religion of Humanity and Its High Priestess. (Illustrated.) JOHANNÈS GROS.	28
Cryptic Legends and Their Significance. C. A. BROWNE.	40
Napoleon and the Pope. F. W. FITZPATRICK.	48
Napoleon and Henry IV. (Illustrated.) EDITOR.	52
The Changing Content of Sin. EDWIN A. RUMBALL.	56
Book Reviews.	63

CHICAGO

The Open Court Publishing Company

LONDON: Kegan Paul, Trench, Trübner & Co., Ltd.

Per copy, 10 cents (sixpence). Yearly, \$1.00 (in the U. P. U., 5s. 6d.).

Copyright, 1907, by The Open Court Publishing Co. Entered at the Chicago Post Office as Second Class Matter.

THE MONIST

A QUARTERLY MAGAZINE

Devoted to the Philosophy of Science

DR. PAUL CARUS
EDITOR



ASSOCIATES { E. C. HEGELER
MARY CARUS

"The Monist" also Discusses the Fundamental Problems of Philosophy in their Relations to all the Practical Religious, Ethical, and Sociological Questions of the day.

TERMS OF SUBSCRIPTION

In the United States, Canada and Mexico, yearly, \$2.00; single copies, 60 cents. In England and the U. P. U., yearly, 9s. 6d.; single number, 2s. 6d.

Bound Volumes I-XVI in half leather, each \$3.00 (12s.). Postage, 1s. extra to countries in the U. P. U. Binding cases for back volumes, same style, postpaid, 75c. (3s. 6d.). Unbound back numbers, \$2.00 per volume.

A sixteen years Index of "The Monist" is now in preparation. Advance orders for said Index will be carefully filed for future execution.

TESTIMONIALS FROM THE READERS OF "THE MONIST"

"I do not believe any periodical in the world is doing more service to civilization and to this country than to other precisely readers than 'The Monist'."—CHARLES S. PEIRCE, Milford, Penn.

"Its great breadth and liberality, its high class of writers, and its able and scholarly reviews, are among its noteworthy features."—LESTER F. WARD, Smithsonian Institution, Washington, D. C.

"I read 'The Monist' because it stands for something, because it gives me the thoughts of contemporary leaders, and because it is always on the side of sound scholarship."—DAVID EUGENE SMITH, PH. D., Professor of Mathematics in Teachers' College, Columbia University, New York City.

"Among the periodicals of a higher class, which I have been receiving for some years past, there is none that I read more regularly than 'The Monist'; and there is not a number in which I have not found some articles of fruitful suggestiveness. I have been so impressed with the value of the periodical that I recommended last year the purchase of a complete set for the library of our university."—J. CLARK, MURRAY, LL. D., Professor of Philosophy in McGill University, Montreal, Canada.

"I do not think that any Journal in the world can rival 'The Monist,' and scarcely any other country but America can ever produce a journal like this, scientific and still

all-comprising, free-thinking and still never vague, but exact."—DR. HUEBBE SCHLEIDEN, Hanover, Germany.

"I am in possession of the entire series of these repositories of select lore. Without intermission these many years they arrived at my 'Wild West' home, expanding my thought and deepening my sympathies with the great scientific movement."—DR. EDMUND MONTGOMERY Hempstead, Texas.

"'The Monist' is certainly performing an important service. I always read the journal with interest and profit. It would be difficult to exaggerate the value of your journals and other publications for the advancement and diffusion of philosophy and science."—Prof. J. McKEEN CATTELL, Professor of Psychology in Columbia University, New York.

"I desire to state that there are found compiled in this journal three qualities which render it superior to most other American and European reviews, namely: (1) The unlimited liberty of discussion and of thought in every branch of science pervading its pages; (2) The varied character of the articles which are published in every single number of it; and (3) The names of its illustrious contributors and collaborators from every part of the world."—G. SERGI, Professor of Anthropology in the University of Rome, Italy.

Librarians, book collectors, and students desiring to secure the back numbers of "The Monist" can obtain exceptionally favorable terms by addressing the publishers at once, as a limited number of sets in excess of requirements are to be disposed of for want of storage facilities. SPECIMEN COPIES ON APPLICATION.



THE TRIAL OF GALILEO GALILEI

Frontispiece to The Open Court.

THE OPEN COURT

A MONTHLY MAGAZINE

**Devoted to the Science of Religion, the Religion of Science, and
the Extension of the Religious Parliament Idea.**

VOL. XXII. (No. 1.) JANUARY, 1908.

NO. 620.

Copyright by The Open Court Publishing Company, 1907.

GALILEO GALILEI.

BY THE EDITOR.

GALILEO Galilei was unquestionably the greatest son of Italy. He was born at Pisa, February 15, 1564. His father, Vincenzo Galilei, was a prominent mathematician who had distinguished himself especially through his writings on the theory of music.

As a youth Galileo Galilei attended the University of Pisa from 1581 to 1585, where he studied medicine, mathematics, and especially physics. In 1589 he was appointed professor of physics at the same institution. Soon afterwards he began his investigation of the laws of falling bodies, the formulation of which still bears his name. He wrote down his results in a pamphlet entitled *Sermones de motu gravium* which, however, gave offense to Giovanni de Medici, because it upset a pet theory of his, and to escape an unpleasant situation Galileo saw himself compelled to resign his professorship in 1591. But he had scarcely withdrawn to Florence when in 1592 he was called as professor of mathematics to the University of Padua.

Galilei's lectures became so famous that students from all countries of Europe flocked to him. He invented the thermoscope (not the thermometer) which created quite a sensation, and in 1604 he discovered a new star in Ophiuchus, which served him as an argument against the Aristotelian doctrine of the unchangeableness of the fixed stars. In 1609 he learned of an instrument invented by a Dutchman (it was Hans Lippersheym of Middelburgh) by which objects at a distance could be seen as if they were close by, and without knowing any further details Galilei invented the telescope which he at once put to use by watching the starry heavens.

With the telescope in his hand one discovery rapidly followed another. He discovered the mountains in the moon and resolved part of the Milky Way into clusters of little stars. In Orion he

saw five hundred smaller bodies in addition to the seven stars; the Pleiades, which had also been deemed to be seven, were augmented to thirty-six in number; and observations of Jupiter revealed the presence of four satellites, which he called the Medicean stars. The rotation of the satellites around their main body in the center was another strong evidence in favor of the Copernican system. In 1610 Duke Cosimo II called the famous naturalist to Florence in the capacity of first ducal mathematician and philosopher, and here he lived in the villa at Arcetri, a suburb of Florence. In that year he observed the phases of Venus and of Mars,—still further evidence in favor of the Copernican system. He saw also the rings of Saturn, whose curious forms were a puzzle even to the most advanced astronomers of that age. In January 1611 he proclaimed for the first time the theory that the planets were not self-luminous, but received their light from the sun.

Galilei was a contemporary of Kepler, and the letters which these two men exchanged sufficiently characterized the difference of their natures. Galilei admired the vigorous German astronomer, but did not dare to imitate him. Kepler tried to encourage Galilei, writing to him in 1611:

“Have confidence, Galileo, and go forward! If I am not mistaken, only a few of the more eminent mathematicians of Europe will forsake us; so great is the power of truth.”

Galilei was a naturalist, an investigator, a thinker. He did not care to fight the battles of free thought. He was not a leader, not a partisan, yet he was too earnest to simply ignore the religious question and leave to others the problem of harmonizing the facts of experience with the Bible, and it was exactly this attitude of conciliation which led him into grievous entanglements.

The higher the fame of Galilei rose, the more bitter grew the spite of his enemies among the defenders of the Ptolemaic system. Galilei saw in nature the handiwork of God, and he insisted that it ought to be read and studied; and that while the Bible should be regarded as the word of God, it was adapted to the times, circumstances, and the people for whom it was written.

Galilei explained these views in a letter addressed to Pater Castelli, a Benedictine and one of his most ardent admirers.

To call Galilei's views conciliatory would be wrong, for he yields absolutely everything to theology. He would to-day pass as orthodox and even Catholic. Galilei writes:

“The Bible in itself can neither lie nor err, but the same is not true of its interpreters who are so much the more exposed to mis-

understanding as the Holy Scriptures use figurative expressions in many places, which may be understood differently. . . . Since Holy Scripture in many places not merely allows, but actually demands another interpretation than is apparently shown by the tenor of its words, it seems to me that in mathematical discussions the last place should be conceded to it. For both Book and Nature proceed from the divine word, the former as inspired by the Holy Ghost, the latter as the carrying out of divine command. In Holy Scripture it was necessary, in order that it be adapted to the understanding of the majority, to say much that is apparently different from its exact meaning; Nature, on the contrary, is inexorable and immutable, unconcerned whether her hidden principles and means of operation are comprehensible or not by human understanding, for which she never deviates from her previously sketched laws. Hence it seems to me that no work of Nature, either which experience brings before our eyes, or which necessarily follows as a consequence of demonstration, should have doubt cast upon it on account of passages of Scripture. For the Bible contains thousands of words of several meanings, and not every sentence in Holy Scripture is subject to so strict a law as every work in nature."

Though it was not printed, Galilei's letter to Pater Castelli became known and excited the wrath of Father Caccini, a Dominican, who in 1614, on the Sunday before Christmas, preached a vigorous sermon against him, and on February 15, 1615, Father Lorini denounced him to the Roman Inquisition for heresy. The Inquisition took note of this charge and investigated the case on the basis of Caccini's statement, declaring it to be a heresy (1) to regard the sun as the center of the universe and to deem it immovable, and (2) to deny that the earth is the center of the universe and to deem it movable. The inquisitors rejected the view that the earth could turn daily about itself, as absurd from a philosophical standpoint, and also as heretical because in contradiction to the Holy Scriptures. Galilei was not directly mentioned in the verdict, but Pope Paul V requested Cardinal Bellarmine to exhort him to drop the Copernican doctrine, and in case he should refuse, to threaten him with imprisonment. On March the fifth, the Copernican doctrine and all books defending it were placed on the Index, among them the book of Copernicus himself "until it be corrected."

Now the enemies of Galilei grew bolder. Grassi, a Jesuit father, tried to ridicule him in a pamphlet entitled *The Astronomical and Philosophical Scales*. Galilei answered his critic in 1623 by simply refuting the error and without committing himself. He

stated that all observations by telescope and otherwise were in perfect agreement with the Copernican doctrine, yet a pious Catholic should reject it, because it could not be harmonized with the Holy Scriptures according to the best exegetics.

Galilei's answer to Father Grassi was very favorably received and was even praised and recommended by Pope Urban VIII, to whom the pamphlet had been dedicated.

Galilei, encouraged through his success, worked diligently at a compendious work, *The Dialogue*,* in which he proposed to sum up the new world-conception and prove it by new arguments. He finished his book within six years, in April, 1630; and in February, 1632, it appeared in print. After the fashion of the age it was written in the form of dialogues in which the Copernican and the old Ptolemaic systems were discussed, and even here Galilei made a concession to his adversaries by treating the Copernican system as a mere hypothesis. The book proposed the arguments of both sides as offered by the disputants, without venturing a verdict of the author himself, the representative of the Ptolemaic system bearing the suggestive name Simplicius. With much hesitation Galilei's *Dialogue* finally received the *imprimatur* of both the Roman and Florentine Inquisition, but solely on the condition that in a concluding dialogue the other disputants should emphatically confess their errors and express their gratitude to Simplicius for his condescension in having benefited them by his sublime and instructive views.

Nevertheless his arguments were so crushing that it may be regarded as the last blow which gave the *coup de grâce* to the old antiquated view, and his enemies chafed under the defeat.

We can not doubt that the significant title Simplicius was intended to describe Galilei's enemy, Father Grassi. But a friend of Grassi had the ear of Urban VIII, and he made the Pope believe that Galilei had impersonated the Pope himself under that name. There is no probability, however, that Galilei in his dangerous position would so unnecessarily have risked losing the Pope's favor while he had every reason to empty the vial of his wrath on Father Grassi.

In August, 1632, the sale of Galilei's book was forbidden. The Grand Duke of Tuscany inquired through his ambassador at Rome how a book that had been approved of a few months before could

* Dialogo di Galileo Galilei, Linceo, Matematico supraordinario dello studio di Pisa e filosofo e matematico primario del Serenissimo Gr. Duca di Toscana.

be prohibited now, and he was told that a record had been found in the archives of the Holy Office according to which Galilei had promised Cardinal Belarmin never again to discuss the Copernican doctrine. This fact Galilei had withheld from the censors and so had procured the *imprimatur* under false pretenses.

The mooted record is dated February 25, 1616, and is on file among the transactions of the Inquisition anent Galilei's case in 1633. It reads that Cardinal Belarmin should request him "not to teach, defend, or discuss such a doctrine in speaking or in writing, and if he did not keep his peace he should be imprisoned." But Galilei denied having any knowledge of it, and since an entry of March, 1616, in the records of the Holy Office, which is a report of Cardinal Belarmin's message to Galilei to surrender his heresy, knows nothing of the record of February 25 and makes no mention of a promise to be enacted from Galilei, historians are inclined to regard the record in question to be a fraud, fabricated for the purpose of incriminating Galilei.*

On September 23 he was summoned to Rome to make his defence. February 13, 1633, the aged naturalist arrived and presented himself before the Holy Office. Between April 12 and June 21 he was cross-examined repeatedly and during all this time and until June 24 he was kept a prisoner by the Inquisition. The documents of the Inquisition are no longer complete; some pages have been torn out, and so it can no longer be either proved or disproved that torture was applied. It is only sure that on June 22, 1633, Galilei was compelled to adjure the Copernican doctrine. The verdict of the Inquisition condemns him for an indefinite period in jail in the Holy Office, but Urban VIII commuted the sentence into detention in the Villa of the Grand-duke of Tuscany on the Trinita del Monte in Rome. Later on Galilei was permitted to withdraw to Siena, and finally to his villa in Arcetri near Florence.

Though Galilei had suffered much during his imprisonment and must have been conscious of the danger to which he was exposed (for it was only in 1600 that Giordano Bruno had been burned alive for heresy in the Forum at Rome), he still continued his scientific work and even made new important discoveries. In 1637 he discovered the libration of the moon; in 1638 he laid the foundation of mechanical physics by his discovery of the doctrine of cohesion; in 1641 he perfected the clock by adding the pendulum to it as a regulator, and he accomplished all this in spite of the

* Silvestro Gherardi, *Il processo Galilei*, and Emil Wohlwill, *Der Inquisitionsprozess des Galileo Galilei*.

fact that his eyes gave out, leaving him blind from 1637 until the end of his life.

On January 8, 1642, Galilei died in his villa at Arcetri. His body was first buried in the chapel of the Novitiate at Florence, but finally, in 1737, was removed to the Church of the Holy Cross (Santa Croce) where a beautiful monument has been erected in his honor. The books of Galilei remained on the Index for over two centuries and were struck out only in 1835 in silent recognition that his condemnation should henceforth be regarded as an error.

An English translation of the Verdict as well as the abjuration imposed upon Galilei by the Inquisition reads as follows:

THE VERDICT.

We, Gaspar, of the title of Holy Cross of Jerusalem, Borgia, brother Felix Certinus of the title of St. Anastasia, surnamed of Ascalum.

Guidus, of the title of St. Mary of the People, Bentivolus, brother Desiderius Scaglia, of the title of St. Charles, surnamed of Cremona.

Brother Antonius Barbarinus, surnamed of St. Onuphrius, Laudivius Zacchia, of the title of St. Peter in vinculis, surnamed of St. Sixtus.

Berlingerius, of the title of St. Augustin Gyposius.

Fabricius of St. Lawrence.

Francis of St. Lawrence.

Martin, of the new St. Mary and Ginethis, Deacons, by the mercy of God, Cardinals of the Holy Roman Catholic Church, and specially deputed by the Holy Apostolic seat as Inquisitors General against heretical perverseness throughout the whole Christian commonwealth.

Whereas you, Galileo, son of the late Vincent Galileo of Florence, being 70 years of age, had a charge brought against you in the year 1615, in this Holy Office, that you held as true, an erroneous opinion held by many; namely, that the Sun is the center of the World, and immovable, and that the Earth moves even with a diurnal motion; also that you had certain scholars into whom you instilled the same doctrine: also that you maintained a correspondence on this point, with certain mathematicians of Germany: also that you published certain Epistles, treating of the solar spots, in which you explained the same doctrine, as true, because you answered to the objections, which from time to time were brought against you, taken from the Holy Scripture, by glossing over the said

Scripture according to your own sense; and that afterwards when a copy of a writing in the form of an Epistle, written by you to a certain late scholar of yours, was presented to you, (it following the hypothesis of Copernicus) you stood up for, and defended certain propositions in it, which are against the true sense, and authority of Holy Scripture.

This Holy Tribunal, desiring, therefore, to provide against the inconveniences and mischiefs which have issued hence, and increased to the danger of our Holy Faith; agreeably to the mandate of Lord N—— and the very eminent Doctors, Cardinals of this supreme and universal inquisition; two propositions respecting the immobility of the Sun, and the motion of the Earth, have been adopted and pronounced, as under.

That the Sun is the center of the World, and immovable, in respect of local motion, is an absurd proposition, false in philosophy, and formally heretical; seeing it is expressly contrary to Holy Scripture.

That the Earth is not the center of the World, nor immovable, but moves even with a diurnal motion, is also an absurd proposition, false in philosophy, and considered theologically, is at least an error in Faith.

But whereas we have thought fit in the interim to proceed gently with you, it has been agreed upon in the Holy Congregation held before D. N. on the 25th day of February, 1616, that the most eminent Lord Cardinal Bellarmin should enjoin you entirely to recede from the aforesaid false doctrine; and, on your refusal, it was commanded by the Commissary of the Holy Office, that you should recant the said false doctrine, and should not teach it to others, nor defend it, nor dispute concerning it: to which command if you would not submit, that you should be cast into prison: and in order to put in execution the same decree, on the following day you were gently admonished in the Palace before the above-said most eminent Lord Cardinal Bellarmin, and afterwards by the same Lord Cardinal: and by the Commissary of the Holy Office, a notary and witnesses being present, entirely to desist from the said erroneous opinion; and that thereafter it should not be permitted you to defend it, or teach it in any manner, either by speaking, or writing; and whereas you promised obedience, you were at that time dismissed.

And to the end, such a pernicious doctrine may be entirely extirpated away, and spread no farther, to the grievous detriment of the Catholic verity, a decree was issued by the Holy Congregation

indicis, prohibiting the printing of books which treat of such sort of doctrine, which was therein pronounced false, and altogether contrary to Holy and Divine Scripture. And the same book has since appeared at Florence, published in the year last past, the inscription of which showed that you were its author, as the title was, "*A Dialogue of Galileo Galilei*," concerning the two principal systems of the World, the Ptolemaic and the Copernican, as the Holy Congregation, recognizing from the expression of the aforesaid book, that the false opinion concerning the motion of the Earth, and the immobility of the Sun prevailed daily more and more; the aforesaid book was diligently examined, when we openly discovered the transgression of the aforesaid command, before enjoined you; seeing that in the same book you had resumed and defended the aforesaid opinion already condemned, and in your presence declared to be erroneous, because in the said book by various circumlocutions, you earnestly endeavor to persuade, that it is left by you undecided, and at the least probable which must necessarily be a grievous error, since an opinion can by no means be probable, which hath already been declared and adjudged contrary to divine Scripture.

Wherefore you have by our authority been summoned to this our Holy Office, in which being examined you have on oath acknowledged the said book was written and printed by you. And have also confessed, that about ten or twelve years ago, after the injunction had been given you as above, that the said book was begun to be written by you. Also that you petitioned for licence to publish it, but without signifying to those who gave you such licence, that it had been prohibited you, not by any means to maintain, defend, or teach such doctrine.

You likewise confessed, that the writing of the aforesaid book was so composed in many places, that the reader might think, that arguments adduced on the false part, calculated rather to perplex the understanding by their weight, than be easily resolved; excusing yourself by saying you had fallen into an error so foreign from your intention, (as you declared) because you had handled the subject in the form of a dialogue, and because of the natural complacence which every one hath in maintaining his own arguments, and in showing himself more acute than others in defending even false propositions by ingenious deductions, and of apparent probability.

And, when a time was assigned you for making your defence, you produced a certificate under the hand-writing of the most eminent Lord Cardinal Bellarmin, procured as you said, in order to defend yourself against the calumnies of your enemies, who every-

where gave it out, that you had abjured, and had been punished by the Holy Office: in which certificate it is said, that you had not abjured, nor had been punished, but only that a declaration had been filed against you, drawn up by the said Lord, and formally issued by the Holy Congregation *Indicis*, in which it is declared that the doctrine concerning the motion of the Earth, and the immobility of the Sun, is contrary to the Holy Scriptures, and therefore can neither be defended or maintained. Wherefore seeing no mention was then made of two particulars of the mandate: namely (*docere & quovis modo*,) teaching, and by any means, we judge that in the course of fourteen or sixteen years they had slipped out of your memory, and for the same reason you were silent respecting the mandate, when you petitioned for a licence to print your book, and yet this was said by you not to maintain, or obstinately persist in your error, but as proceeding from vain ambition, and not perverseness. But this very certificate produced in your defence, rather tends to make your excuse look worse, because in it is declared, that the aforesaid opinion is contrary to the Holy Scripture, and yet you have dared to treat of it as a matter of dispute, and defend, and teach it as probable: nor does the licence itself favor you, seeing it was deceitfully and artfully extorted by you, as you did not produce the mandate imposed upon you.

And whereas it appeared to us, that the whole truth was not expressed by you, respecting your intention: we have judged it necessary to come to a more accurate examination of the business, in which (without prejudice to those things which you have confessed, and which have been brought against you as above, respecting your said intention) you have answered as a penitent, and good Catholic. Wherefore we having maturely considered the merits of your cause, together with your abovesaid confessions, and defence, and are come to the underwritten definitive sentence against you.

Having invoked the most holy name of our Lord Jesus Christ, and of his most glorious mother the ever blessed Virgin Mary, we, by this our definitive sentence, by the advice and judgment of the most Reverend Masters of Holy Theology, and the Doctors of both Laws, our Counsellors respecting the cause and causes controverted before us, between the magnificent Charles Sincerus, Dr. of both Laws, Fiscal Procurator of this Holy Office on the one part, and you, Galileo Galilei defendant, question examined, and having confessed, as above on the other part, we say, judge and declare, by the present processional writing, you, the abovesaid Galileo, on account of those things, which have been adduced in the written process,

and which you have confessed, as above, that you have rendered yourself liable to the suspicion of heresy by this office, that is, you have believed and maintained a false doctrine, and contrary to the Holy and Divine Scriptures, namely, that the Sun is the center of the orb of the Earth, and does not move from the East to the West, and that the Earth moves and is not the center of the World; and that this position may be held and defended as a probable opinion, after it had been declared and defined to be contrary to Holy Scriptures, and consequently that you have incurred all the censures and penalties of the Holy Canons, and other Constitutions general and particular, enacted and promulgated against such delinquents from which it is our pleasure to absolve you, on condition that first, with sincere heart and faith unfeigned, you abjure, execrate and detest the above errors and heresies, and every other error and heresy, contrary to the Catholic and Apostolical Roman Church, in our presence, in that formula which is hereby exhibited to you.

But that your grievous and pernicious error and transgression may not remain altogether unpunished, and that you may hereafter be more cautious, serving as an example to others, that they may abstain from the like offences, we decree, that the book of the Dialogue of Galileo, be prohibited by public edict, *and we condemn yourself to the prison of this Holy Office, to a time to be limited by our discretion; and we enjoin under the title of salutary penitence, that during three years to come you recite once a week the seven penitential Psalms*, reserving to ourselves the power of moderating, changing, or taking away entirely, or in part, the aforesaid penalties and penitences.

And so we say, pronounce, and by our sentence declare, enact, condemn, and reserve, by this and every other better mode or formula, by which of right we can and ought.

So we, the underwritten Cardinals pronounce,

F. Cardinal de Asculo,
G. Cardinal Bentivolus,
F. Cardinal de Cremona,
Fr. Antony Cardinal S. Onuphrii,
B. Cardinal Gypsius,
F. Cardinal Verospius,
M. Cardinal Ginettus.

THE ABJURATION OF GALILEO.

I Galileo Galilei, son of the late Vincent Galileo, a Florentine, of the age of 70, appearing personally in judgment, and being on my

knees in the presence of you, most eminent and most reverend Lords Cardinals of the Universal Christian Commonwealth, Inquisitors



TOMB OF GALILEO IN FIRENZE.

From a photograph.

General against heretical depravity, having before my eyes the holy Gospels, on which I now lay my hands, swear that I have al-

ways believed, and now believe, and God helping, that I shall for the future always believe, whatever the Holy Catholic and Apostolic Roman Church holds, preaches, and teaches. But because this Holy Office had enjoined me by precept, entirely to relinquish the false dogma which maintains that the Earth is the center of the world, and immovable, and that the Earth is not the center, and moves; not to hold, defend, or teach by any means, or by writing, the aforesaid false doctrine; and after it had been notified to me that the aforesaid doctrine is repugnant to the Holy Scripture, I have written and printed a book, in which I treat of the same doctrine already condemned, and adduce reasons with great efficacy in favor of it, not offering any solution of them; therefore I have been adjudged and vehemently suspected of heresy, namely, that I maintained and believed that the Sun is the center of the world, and immovable, and that the Earth is not the center, and moves.

Therefore, being willing to take out of the minds of your eminences, and of every Catholic Christian, this vehement suspicion of right conceived against me, I with sincere heart, and faith unfeigned, abjure, execrate, and detest the aforesaid errors and heresies, and generally every other sect contrary to the above-said Holy Church; and I swear that I will never any more hereafter say or assert, by speech or writing, any thing through which the like suspicion may be had of me; but if I shall know any one heretical, or suspected of heresy, I will denounce him to this Holy Office, or to the Inquisitor, and Ordinary of the place in which I shall be. I moreover swear and promise, that I will fulfil and observe entirely all the penitences which have been imposed upon me, or which shall be imposed by this Holy Office. But if it shall happen that I shall go contrary (which God avert) to any of my words, promises, protestations and oaths, I subject myself to all the penalties and punishments, which, by the Holy Canons, and other Constitutions, general and particular, have been enacted and promulgated against such delinquents: So help me God, and his Holy Gospels, on which I now lay my hands.

I, the aforesaid Galileo Galilei, have abjured, sworn, promise, and have bound myself as above, and in the fidelity of those with my own hands, and have subscribed to this present writing of my abjuration, which I have recited word by word. At Rome, in the Convent of Minerva, this 22d of June, of the year 1633.

I, Galileo Galilei, have abjured as above, with my own hand.

Our frontispiece represents the scene of Galilei's abjuration in a hall of the Vatican which is ornamented with Raphael's beautiful picture known as the "Disputa." In the center we see the grand old naturalist humiliated by his enemies. He is as stately in body, though broken in health, as his mind is imposing, and how foolish is the part played by his proud judges! The armed soldier behind Galilei is an evidence of the fact that the performance is in bitter earnest and not merely a theatrical scene. The arguments offered in behalf of the antiquated error,—torture on the rack and a prospective heretic's death among burning fagots—seem convincing, for Galilei reads the abjuration as prescribed by the Holy Office. A popular tradition relates that Galilei murmured to himself the words: "*Eppur si muove*," i. e., "and yet it [the earth] moves!" Though this is unproved, we can not doubt that he thought something like it. The sentence has become proverbial to denote the conviction that the verdicts of science can not be overturned by any tribunal, secular or ecclesiastical.