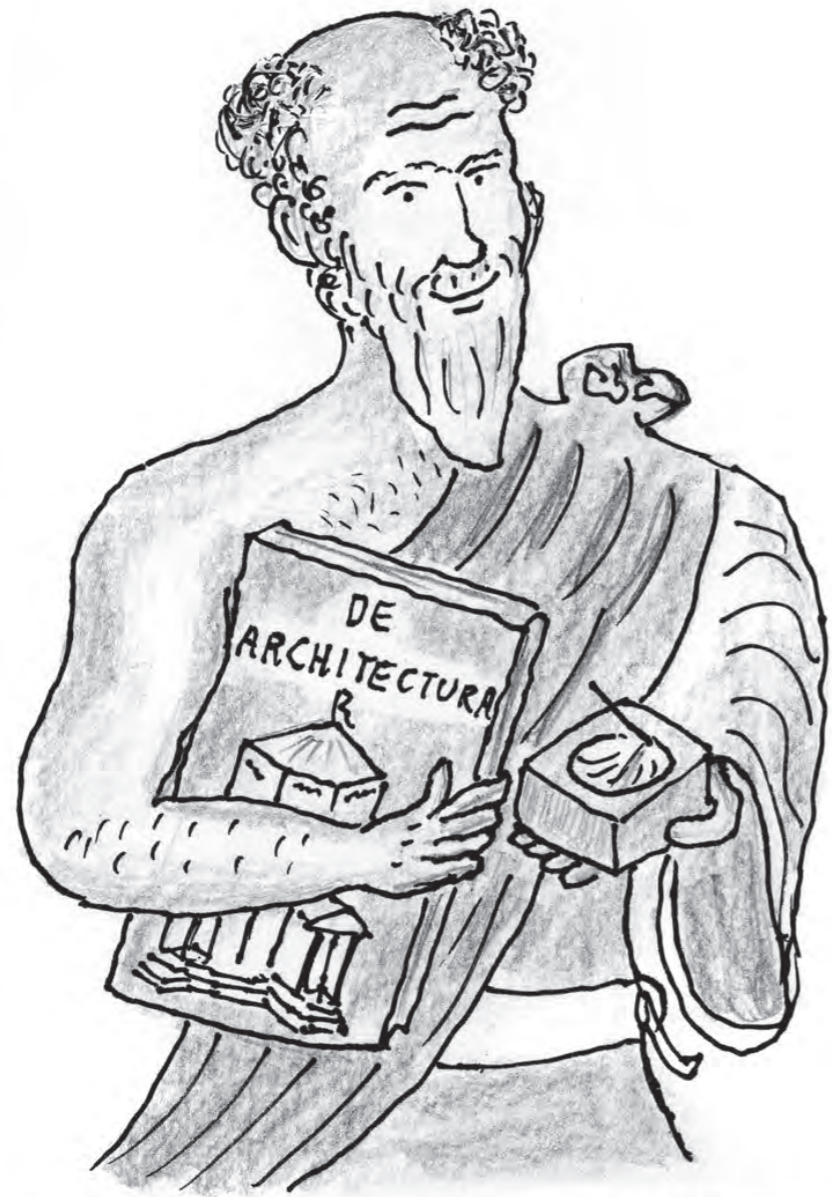


JOHN DEE'S
NEW WORLD
HOROLOGIIUM



VITRUVIUS



JOHN
DEE

“...the Architect’s work must be solidly based on the principles of Geometry, Arithmetic, Optics, Music, Astronomy, Cosmography – indeed all the Mathematical Arts...”

“...by Optics, I mean the Lights of heaven are well-led in the buildings, from certain quarters of the world.”

“As for Astronomy, the Architect must know East, West, South, and North, and the design of the heavens, the Equinox, the Solstices, and the course of the stars.

Anyone who lacks knowledge of these matters will be unable to understand the Art of Horology.”

John Dee on the “Art of Horometry”

Horometry is a Mathematical Art which demonstrates how, for any given location, the exact designation of time may be known.

In antiquity, part of this Art was called Gnomonica.
More recently, it was called Horologiographia.
And in English, it is called Dialing.

It takes more than a talented Painter to prescribe the path of the Sun’s shadow, (down to a hair’s-width), for any regular surface in any given location.

In my youth, I invented a way to accomplish this feat of determining how, using any
Horizontal Dial [like a dial on a floor],
Mural Dial [a wall dial]
or Equinoctial Dial [a tilted dial],
at any given hour (provided the Sun is shining),
to determine the Sign and Degree ascendant.

Man's affairs often require knowledge
of time at moments when neither the
Sun, Moon, or Stars can be seen.

So, industrious mechanics invented a way
to keep track of time using a consistent flow of water.
Vitruvius rightfully praises to the skies
the famous Inventor Ctesibius.

Later, hours were measured by running Sand.

Then, using gears and by weights.

And lately, using gears without weights,
using a Spring instead.

But all these methods require corrections over time...
because of the inaccuracy of their own Operation.

There remains,
among the Philosophers,
a more excellent,
more commodious,
and more marvelous way
than all these to imitate the motion
of the Primovant
(or the first equinoctial motion)
by using Nature and Art,
which you shall understand more of,
by further search in weightier studies.

*A
perpetual
motion*

Dee's Advice to Astronomers:

And won't the Astronomer regret all his sleepless vigils and the cold labors he has suffered under the open sky, when here, without any discomfort from the air, under his own roof, with windows and doors shut on all sides, at any given time, he is able to observe the movements of the heavenly bodies?

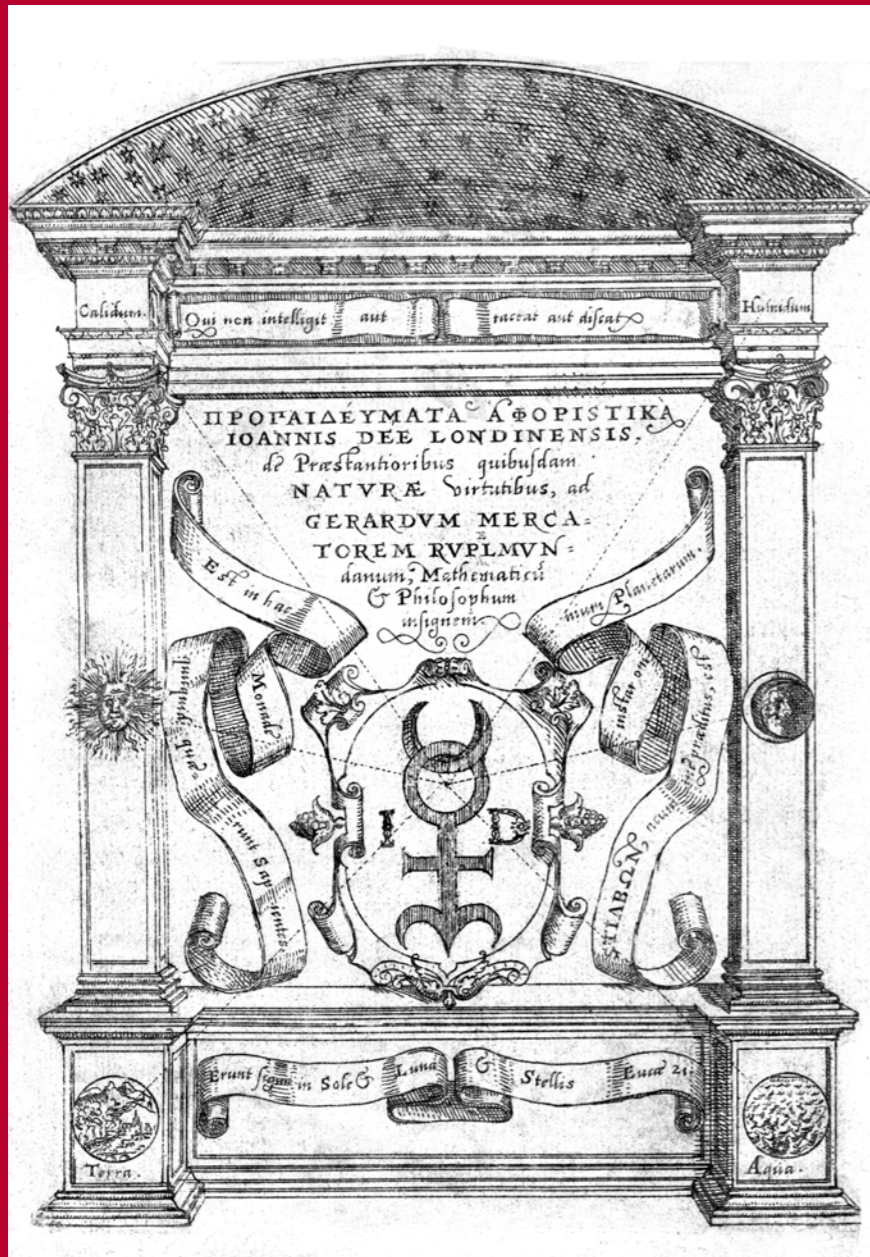
And, indeed, without any mechanical instruments made from wood or brass?

Hydrologic,	Which demonstrat
Horometrie, —	running Water) to
Zographie, —	Which demonstrat
Architecture, —	and lightes being d
Navigation	Which is a Science
	shed, are iudged.

a certaine od Arte, called *Althalmasat*,

In Greek,
thalamos means
room or chamber.

Althalmasat
is Dee's (cryptic)
coined term for the
camera obscura.



Aphorism 49.

Investigate why planets reflect
rays of their own light
... from the air, clouds, water,
mountains and similar bodies.

Observe and contemplate the wonders of
the many fracturings of the heavenly rays
in the air, the clouds, and the water
and you will be impelled to praise the
infinite goodness and Wisdom of God.

Aperture



Meridiana Line



Aperture

Meridiana Line



★ CANIS MINOR
PROCTON

★ ORIONIS HYMERVS
OCCIDENTALIS

★ ORIONIS HYMERVS
ORIENTALIS

★ AQUILAE LYCIDA

79
78
77
76
75
74
73
72

104° 3' 20" ★

77° 16' 27" ★

84° 45' 5" ★

294° 3' 27" ★

66

34

68

70

71

35

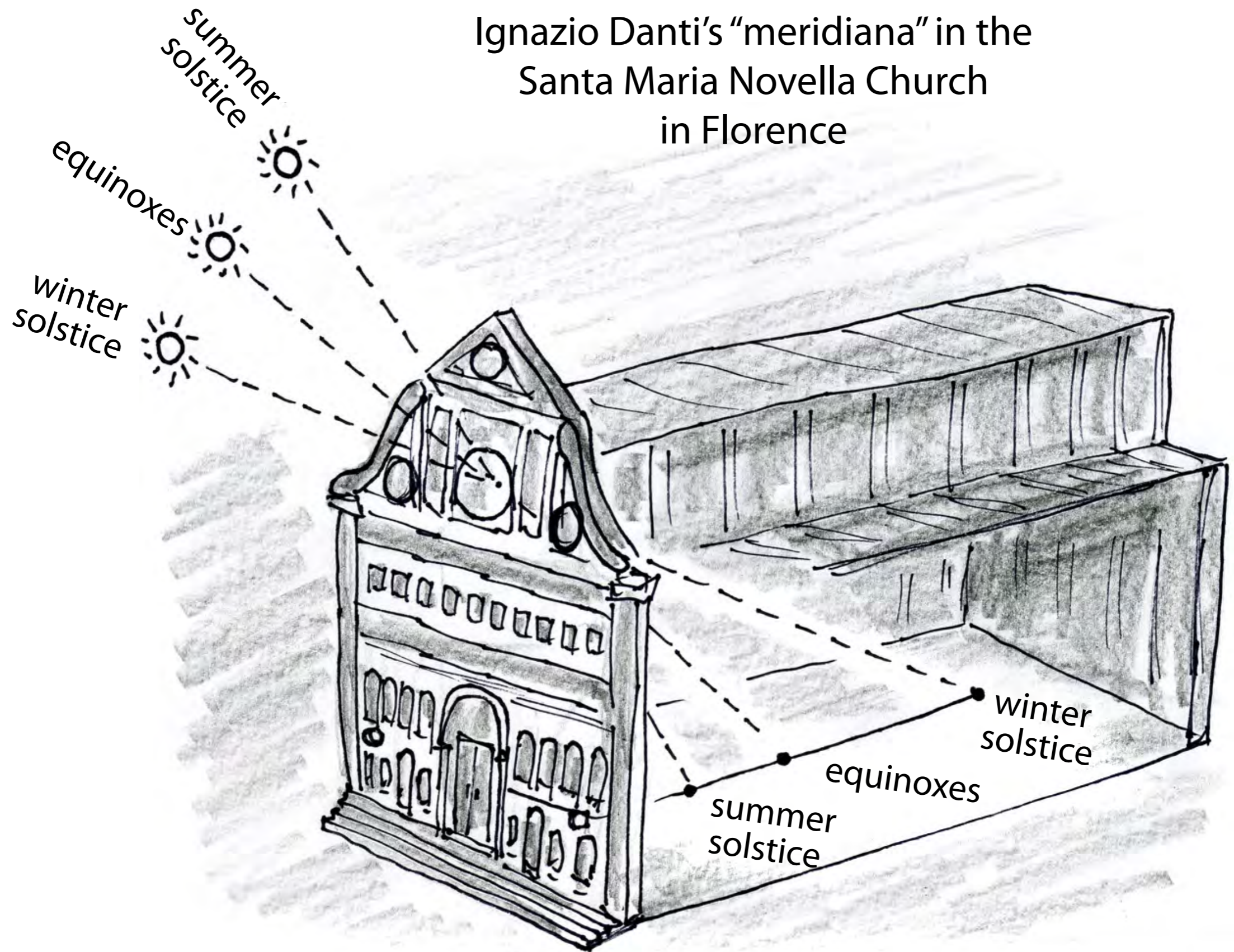
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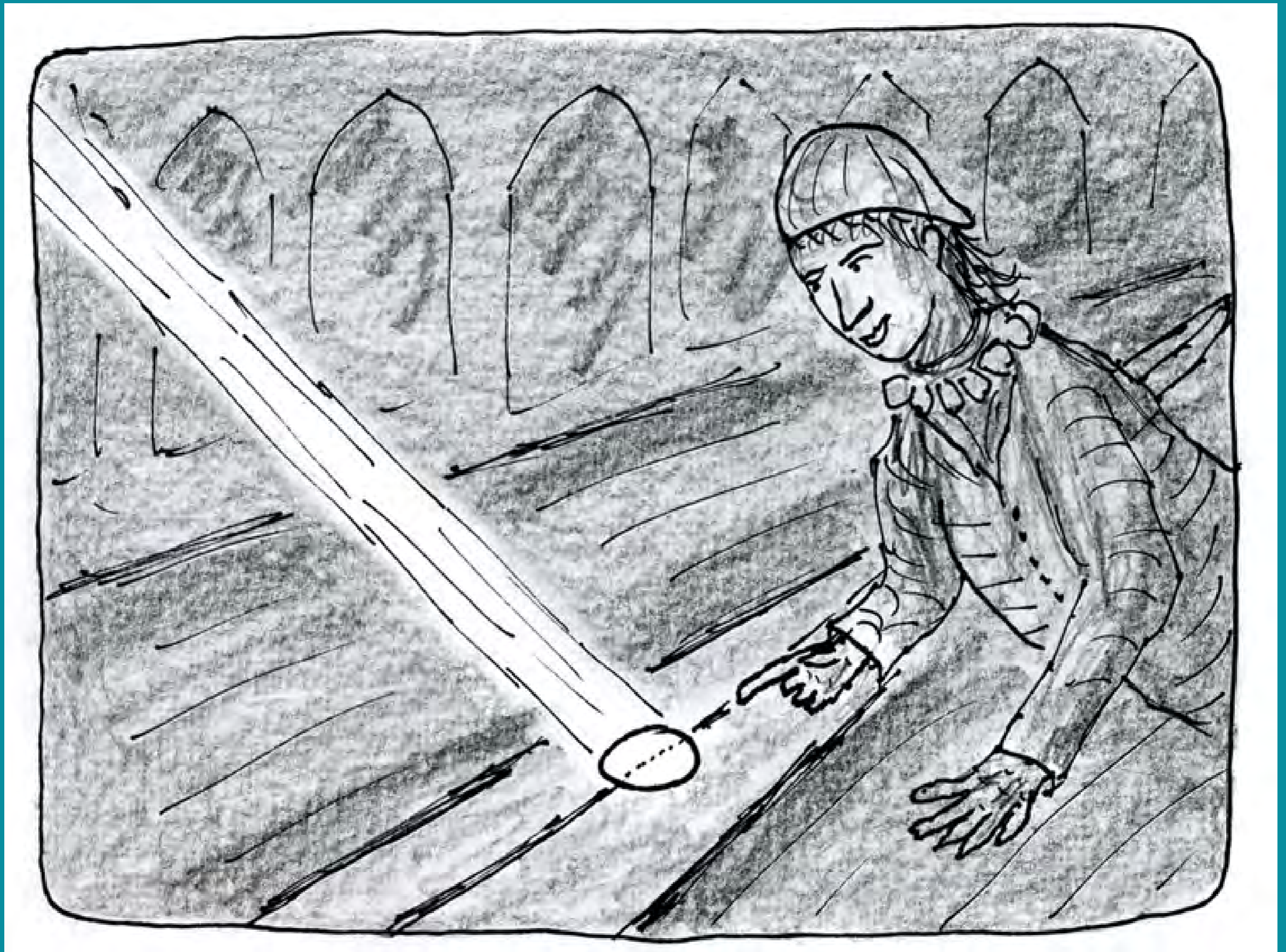
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Ignazio Danti's "meridiana" in the Santa Maria Novella Church in Florence

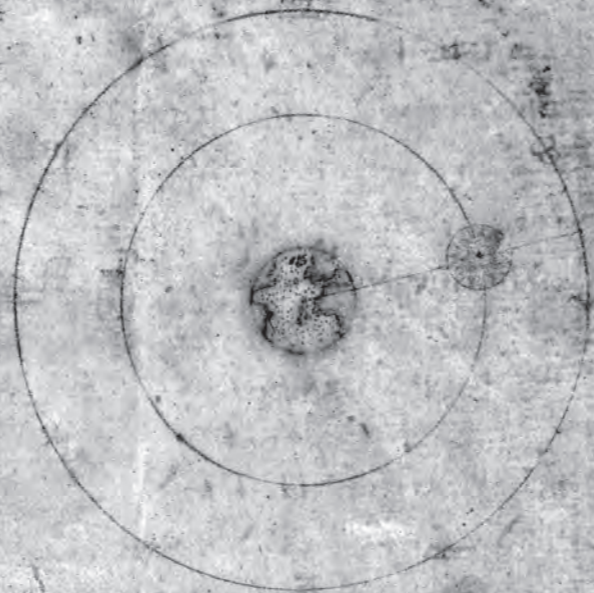




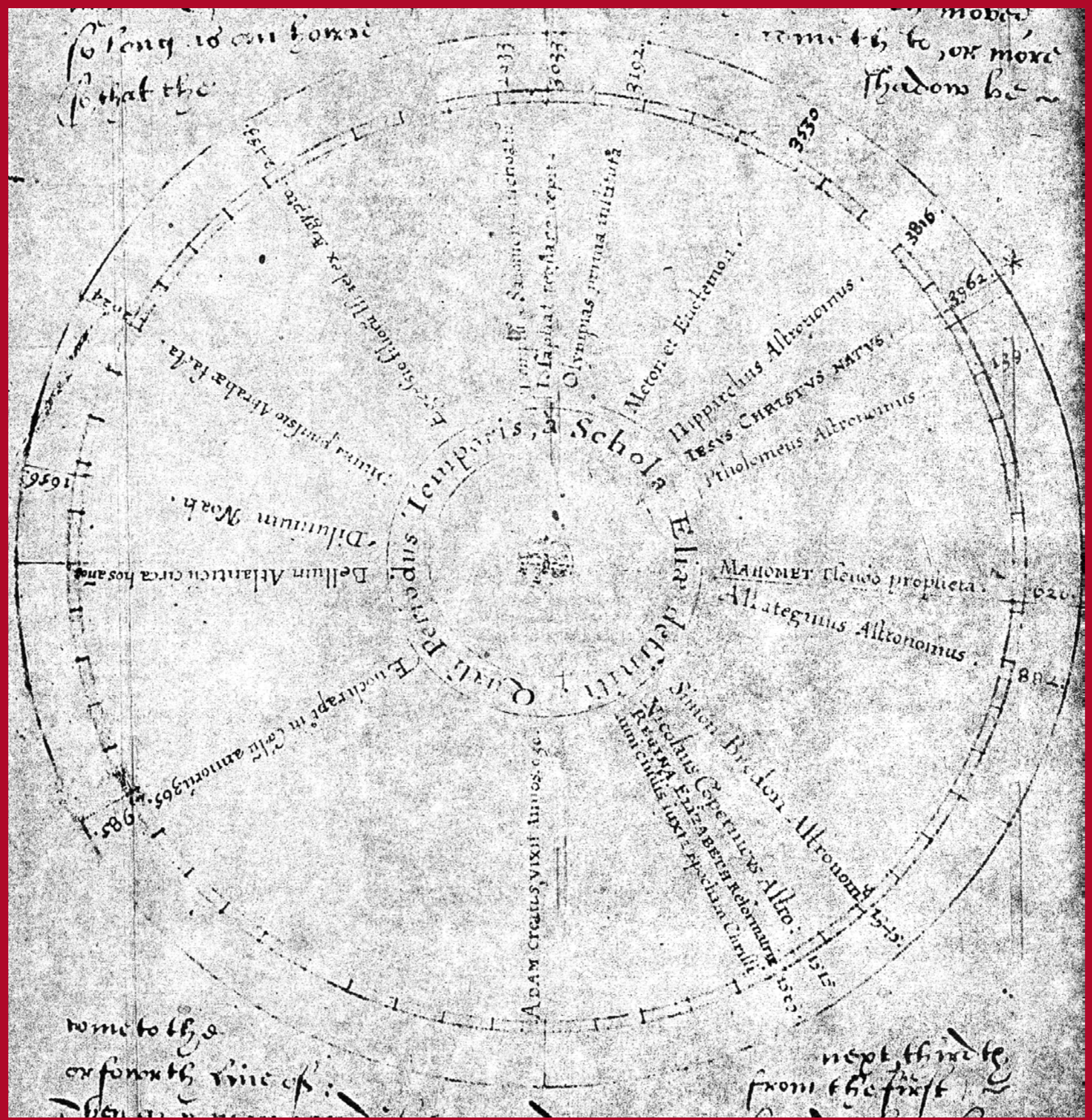
1

A playne discourse and vnderstandable Device for our gracious Quene Elizabeth our most excellent Mai. to perceiue, and consider concerning the needfull reformation of the vulgar Calender, for the Civile yeres and daies accomplishing, or satisfying according to the true truth, or point.

In the method of this present consideration of
time, the true place of any planet or other star, is
determined by a right line imagined to passe from the
center of the earth by the center of the body of the planet or
other star, up unto the first and highest heavenly spher
superficies. And wheresoever the upper end and Mathematicall
point of that so imagined line is, there, the true place of the
star or planet is esteemed and reckoned to be, and as any
planet or other star moveth either forward, backward or to
sideward, so, continually, the upper end of the said line
determineth the true place
of the same planet or star,
so moved: And such due
preeminence hath the
Sunne, that the uniforme
constant trace of his con-
tinuall course (by the said
line in the Heavens, deter-
mined, is the principall cir-
cular circumference, unto
all other planets and stars,
these motions are compared:
as, either, in what place thereof they are; or how farre wide (in latitude)
on either side. That imagined circumferentiall trace of the

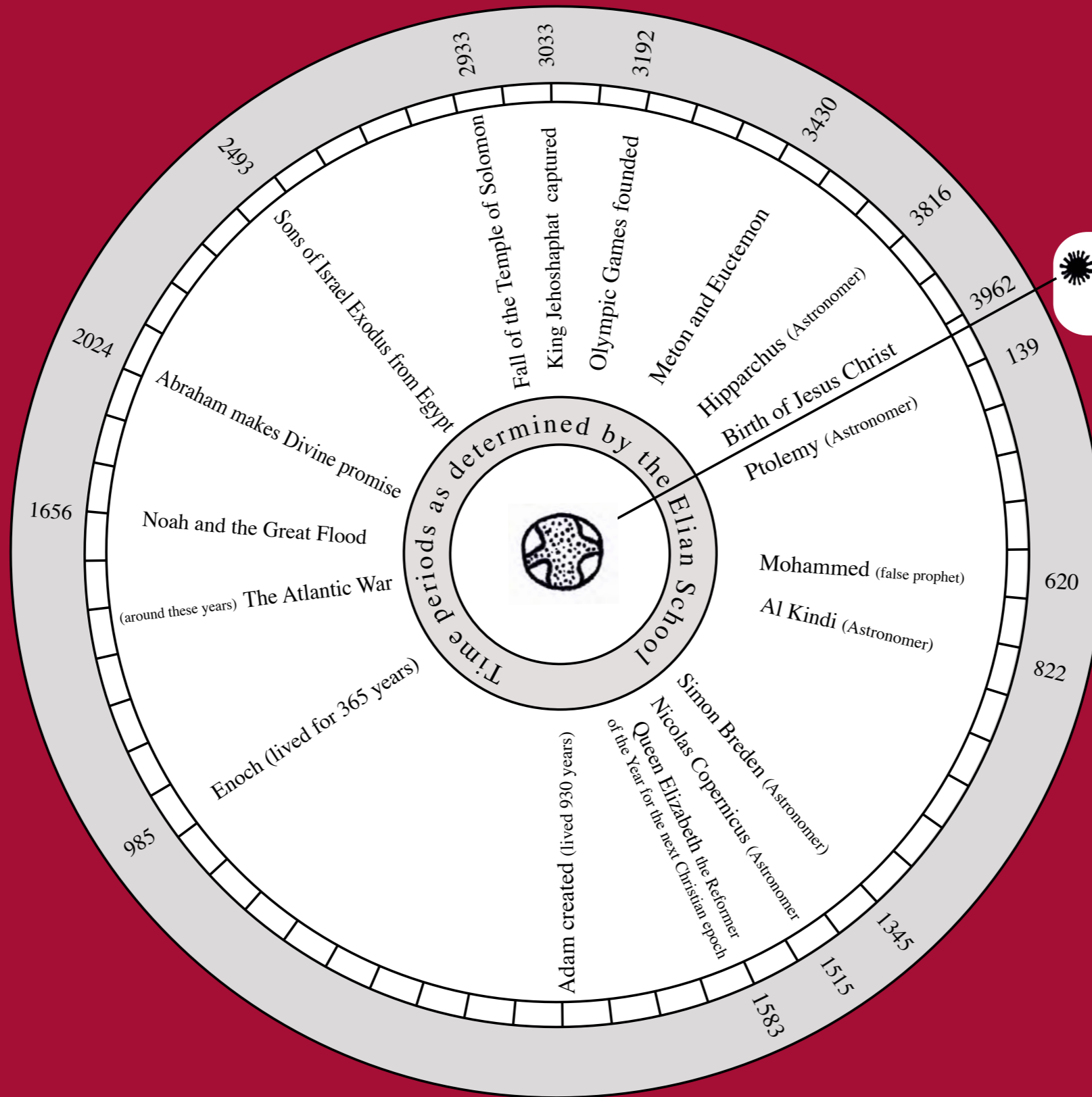


Sunnes waye,



some to the
or from the line of

next, third to
from the first



*some later writers affirm 3928 to be a more exact date for Christ's birth

Dee's "Circle of Time" from Adam to Queen Elizabeth I

101

Simon Breden (Astronomer)

Nicolas Copernicus (Astronomer)

Queen Elizabeth the Reformer
of the Year for the next Christian epoch

Adam created (lived 930 years)

1345

1515

1583

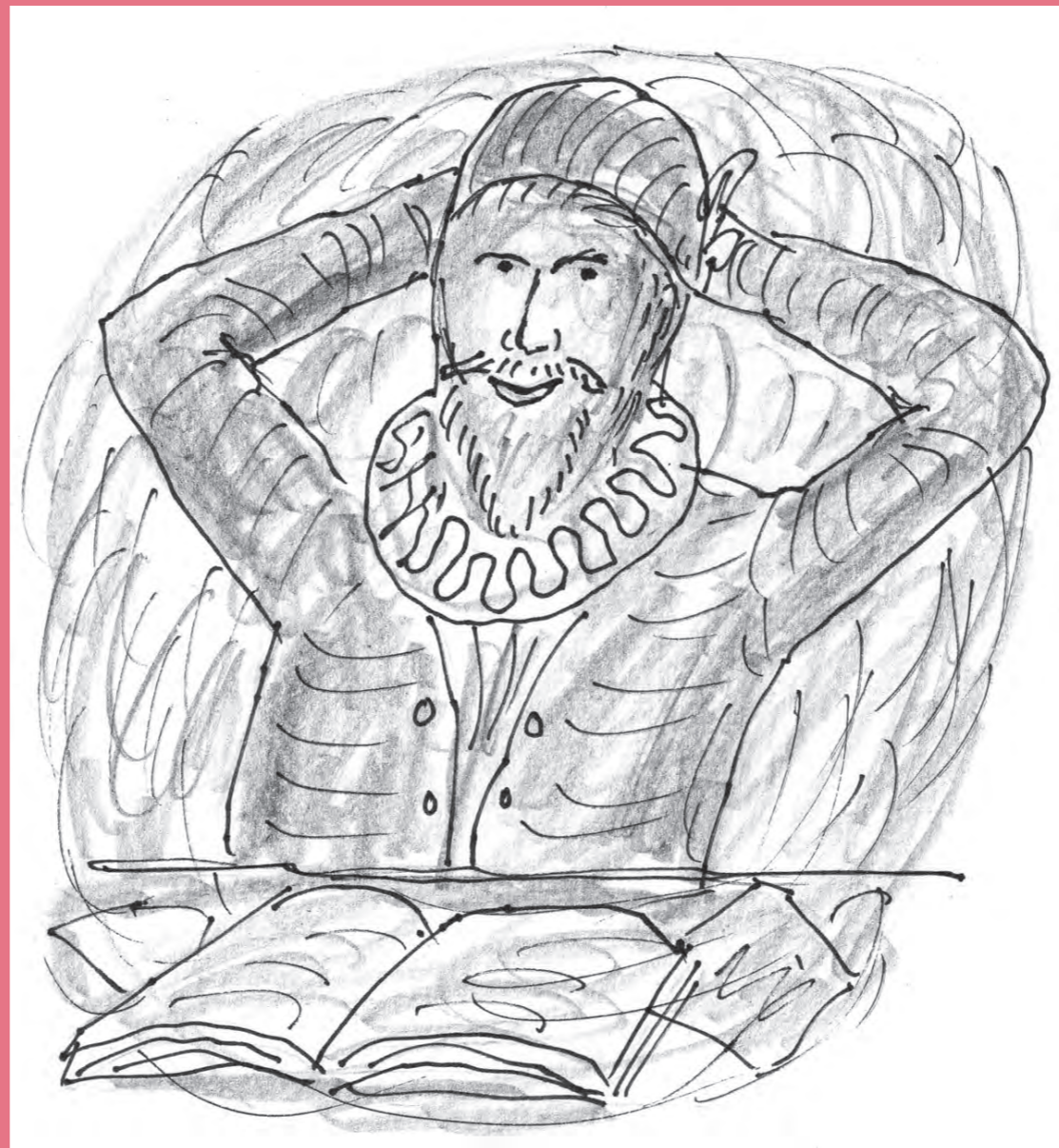
ELIZABETH, OUR EMPRESS BRIGHT,
WHO IN THE YEAR OF EIGHTY THREE,
THUS MADE THE TRUTH COME TO LIGHT,
AND CIVIL YEAR WITH HEAVEN AGREE.

New
World

with
Religious
freedom

New
Time

1582



Colony on the
John Dee River

**MISSION
FAILED**

Dee's Calendar
reform

REJECTED



1583

WHAT DID
THE TOWER
ORIGINALLY
LOOK LIKE?

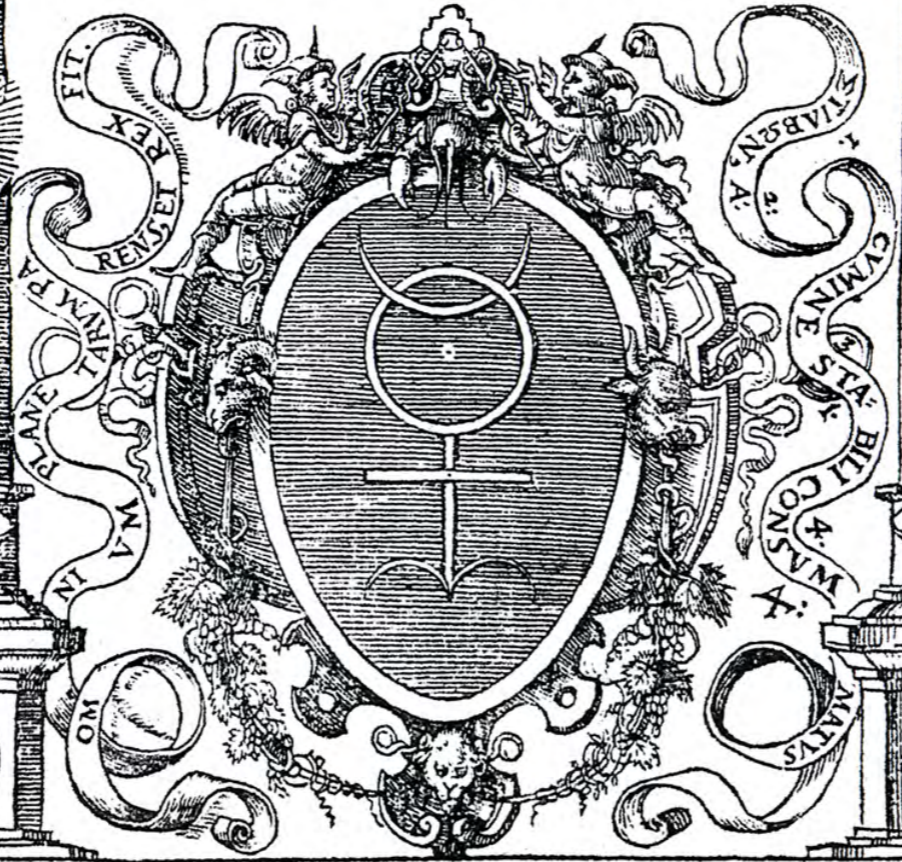


QVI NON INTELLIGIT, AVT TACEAT, AVT DISCAT.

IGNIS

AËR

MONAS HIEROGLYPHICA
IOANNIS DEE, LONDINENSIS,
A D
MAXIMILIANVM, DEI GRATIA
ROMANORVM, BOHEMIÆ ET HVNGARIÆ
REGEM SAPIENTISSIMVM.



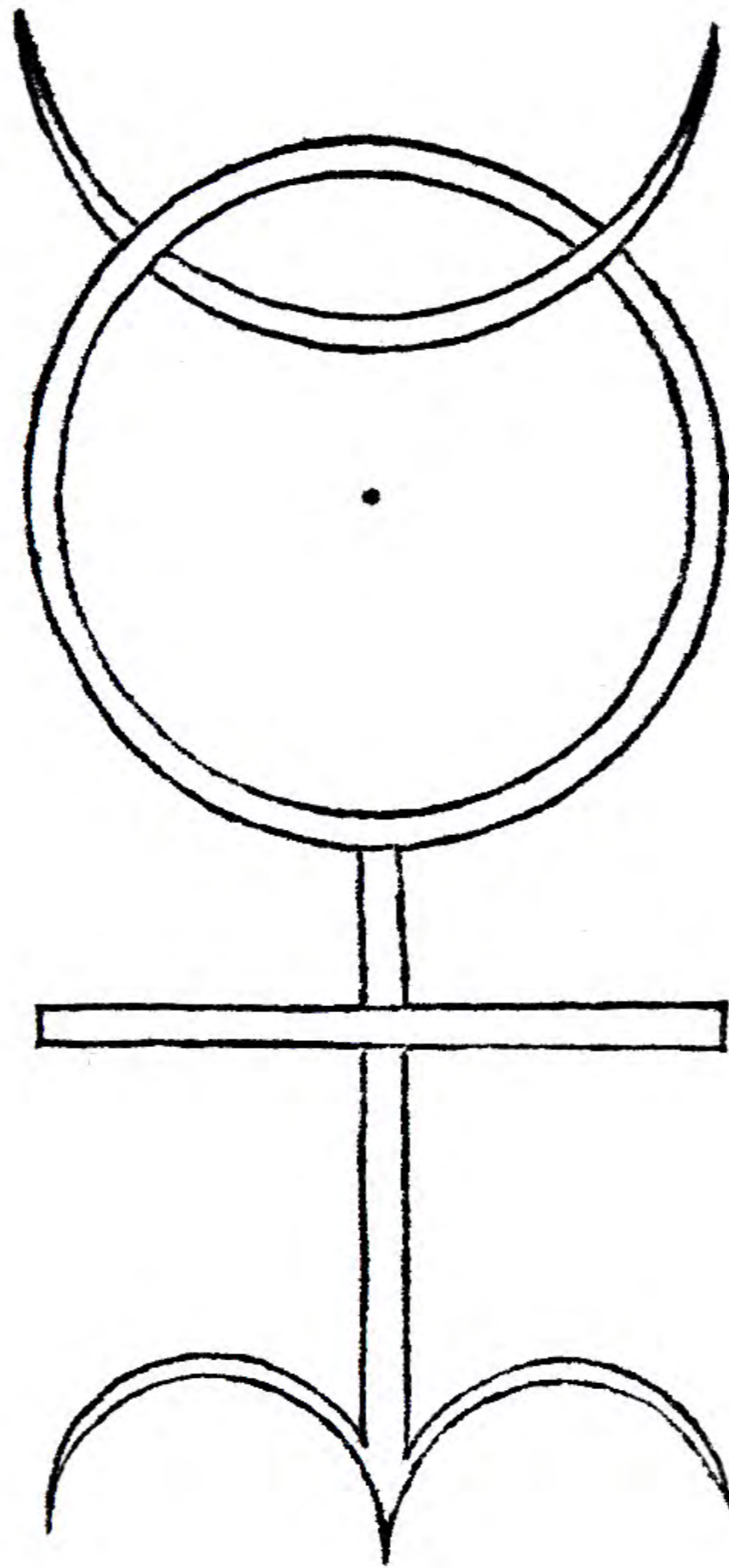
DE RORE CAELI, ET PINGVEDINE TERRAE, DET TIBI DEVS. Gen. 27.

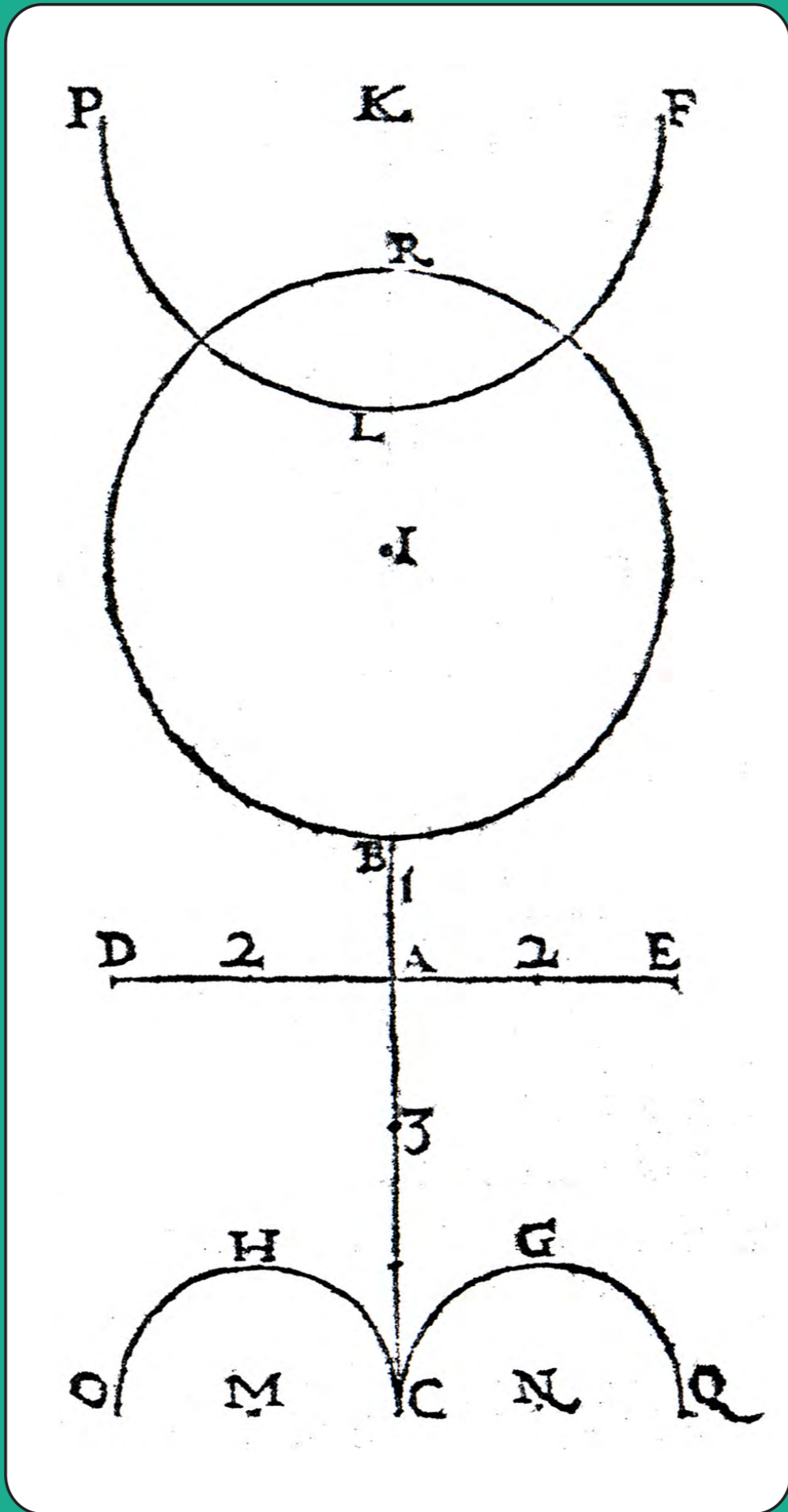
Guliel. Silvius Typog. Regius, Excud. Antuerpiæ, 1564.











HORIZON AETERNITATIS.

8			4
7			3:
6			2:
5			1:
4	Ignis	1000.	7
3	Aëris	100.	6
2	Aquæ	10.	4
1	Terræ Pugillus	1.	1

Antiquorum ænigma, Decur-
plæ Proportionis, explicatū.

QUATERNARIUS: quo Nume-
ratio, MONAS nostra SABBATI-
ZAT: ARTIS NATVRÆ-
QVE vltimam nacta P O-
TESTATEM.

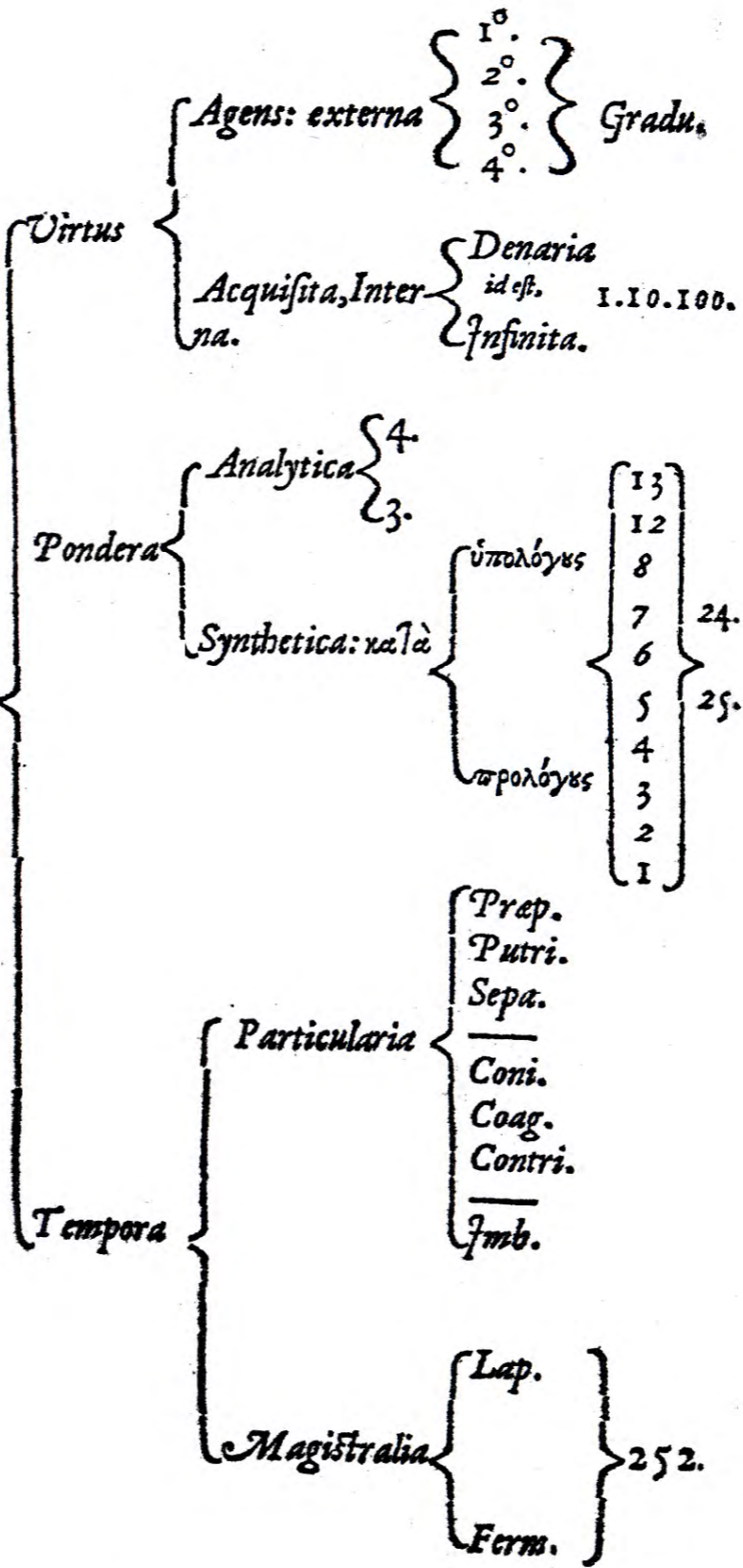
REGNUM	3	Anthrax	24.25.
is: Spūs: An- imæ	2	Citrinitas	
Corpo- ris:	2	Serenitas Chrystallina	12.13.
	1	Tenebræ	



EX istis Schematibus, plura elici possunt: (si penitius con-
siderentur) quàm apertis par est proferre verbis. Hoc ta-
men præ ceteris monemus singulare vnum, (à nobis etiam
Primis vnà cum tota hac noua euulgatum arte) Rationem

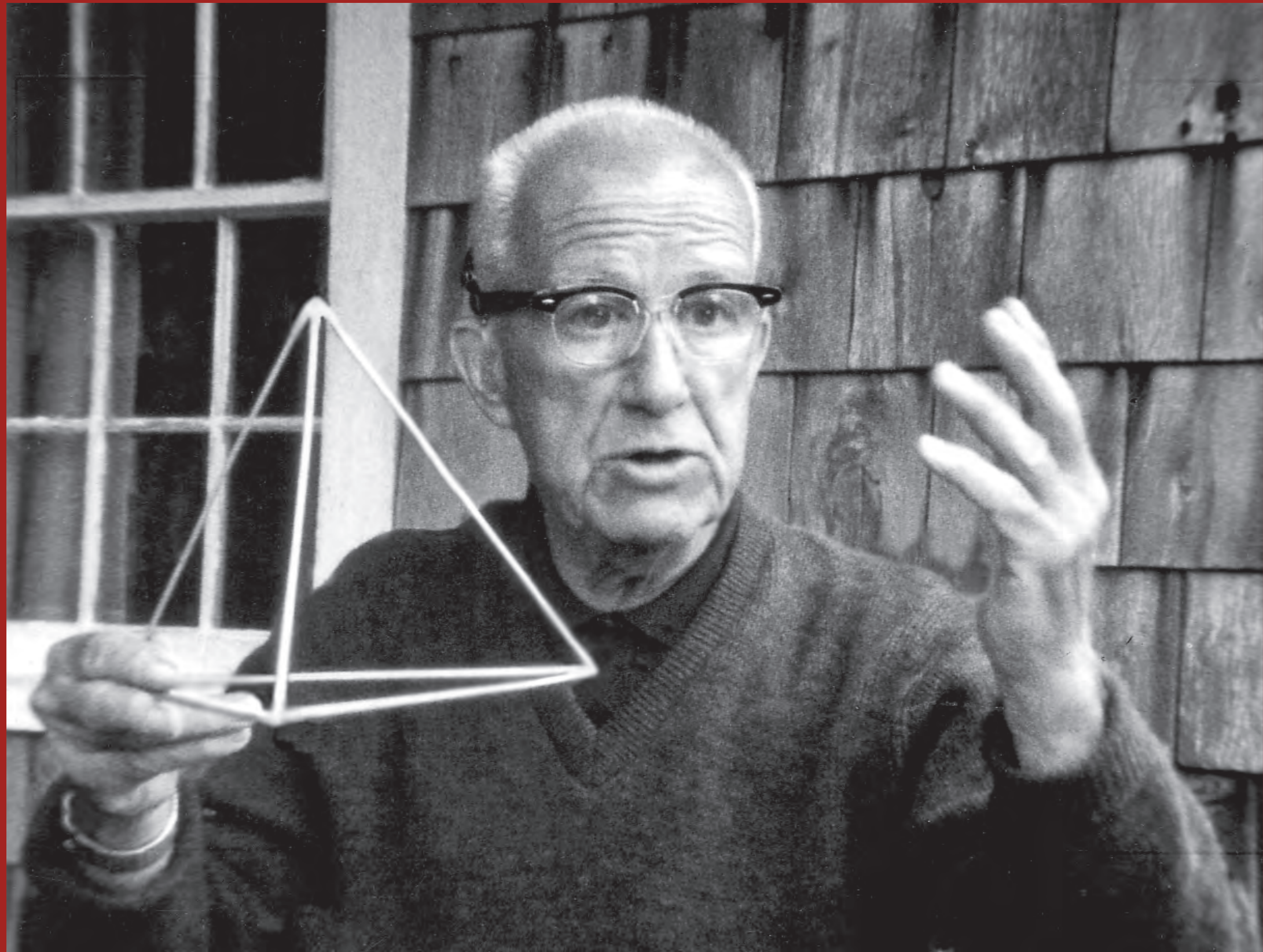
Numeri nostri
 hanc habent Di-
 gnitatem: Ut il-
 lorū violare Le-
 ges, Peccatum
 sit contra Na-
 turæ Sapientiā:
 quæ, eisdem nos
 docere velit, (in
 Mysterijs suis
 maximis exa-
 minandis) qui-
 bus certis Limi-
 ribus Statisque,
 Illi, denūciantur

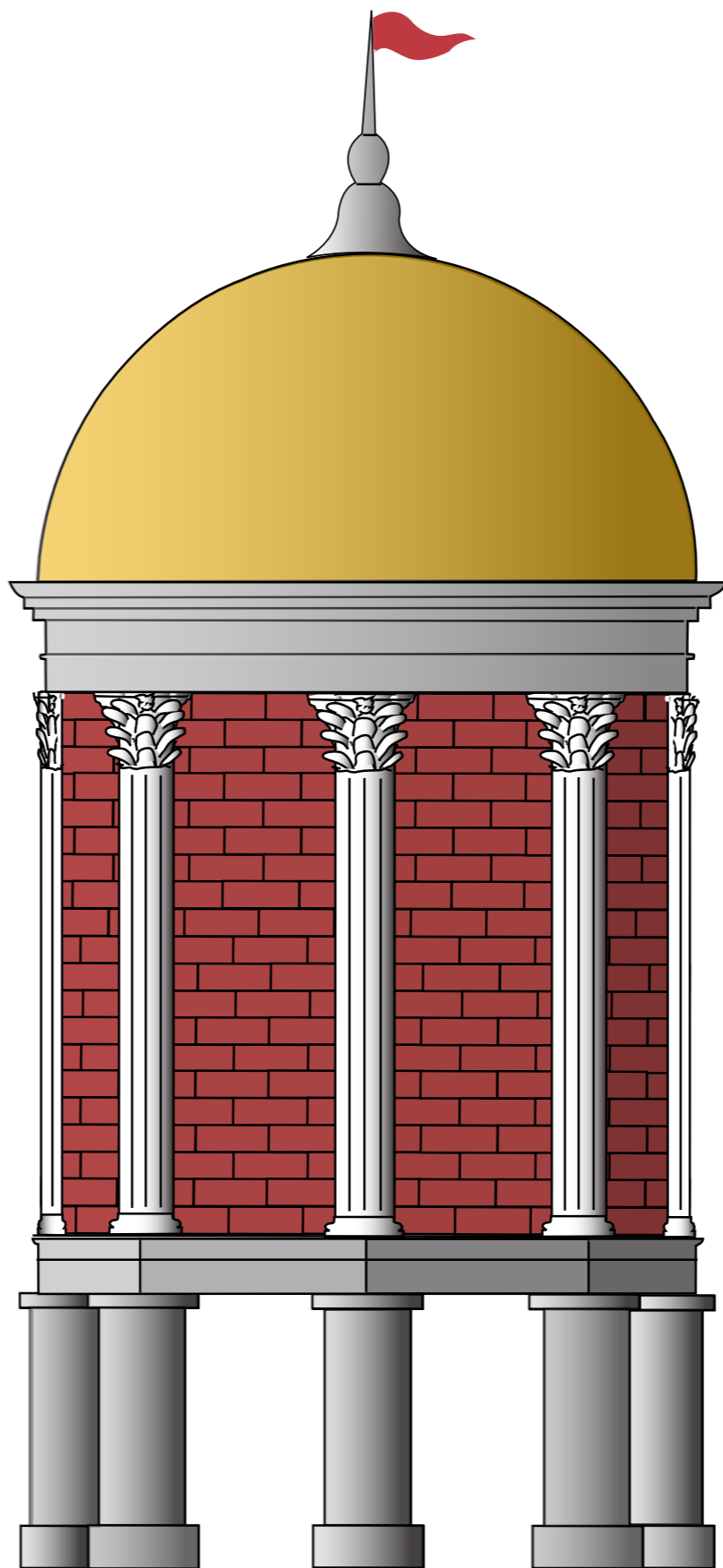
ista,



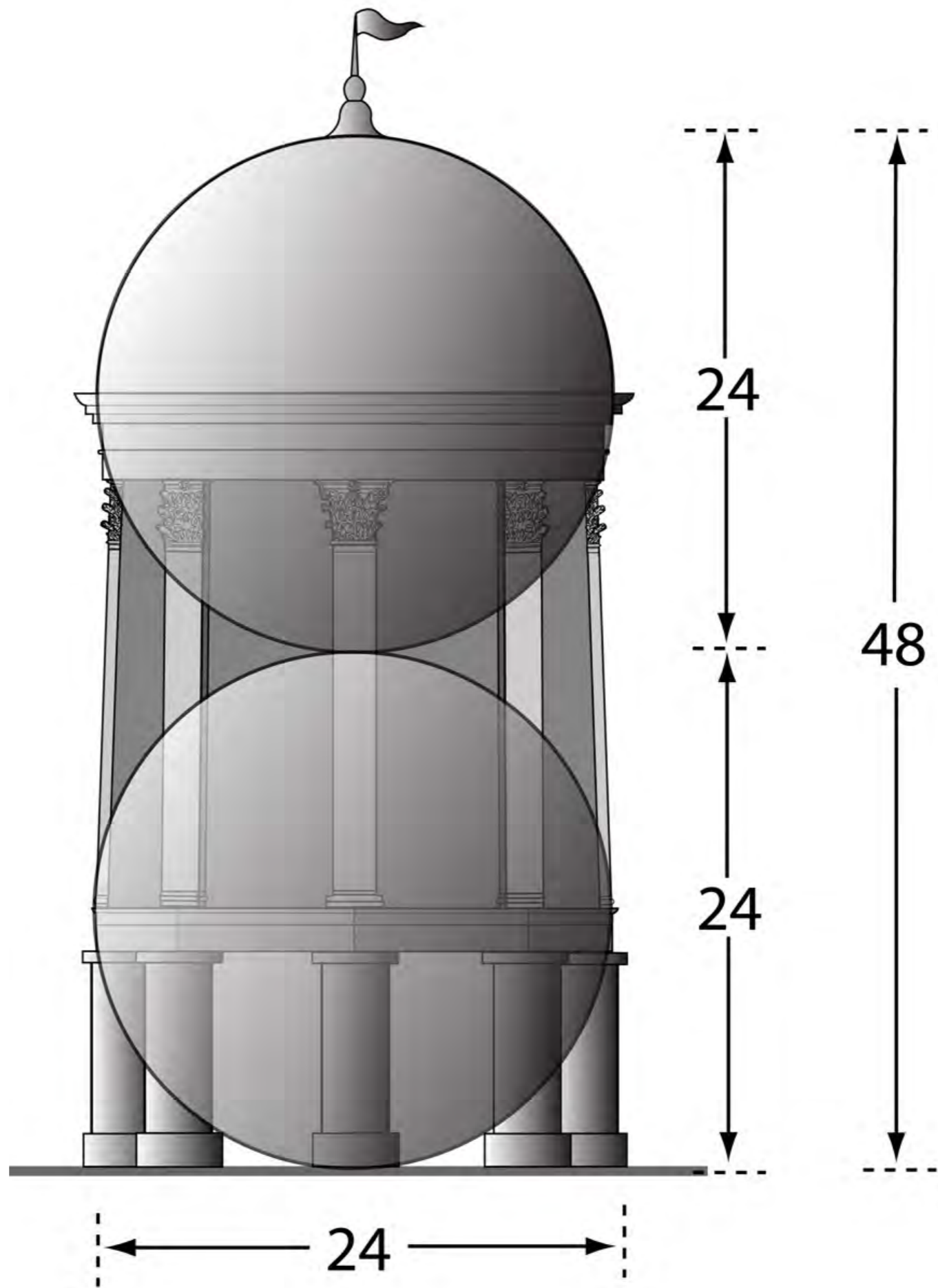
Magistralia { *Lap.*
Ferm. } 252.

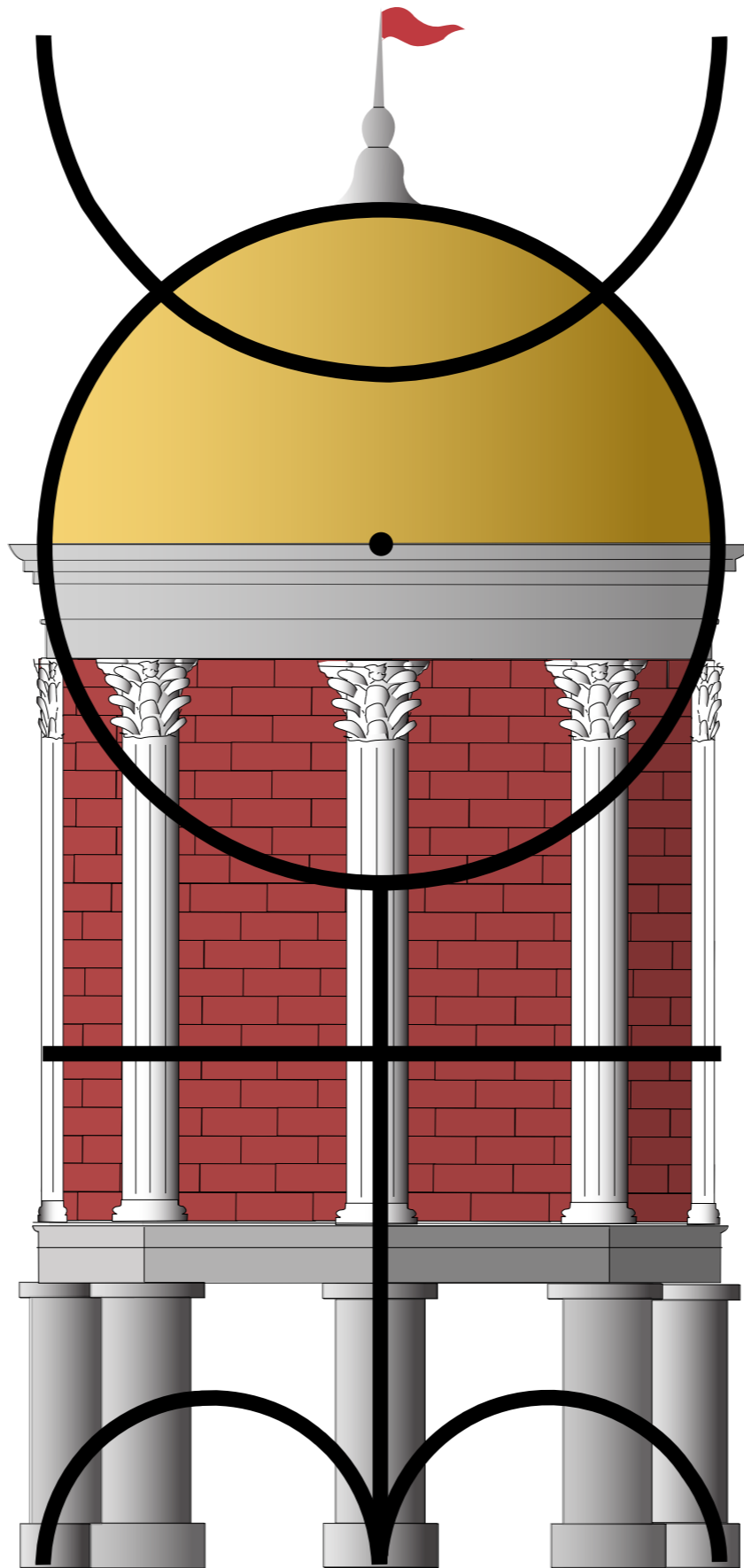
252.

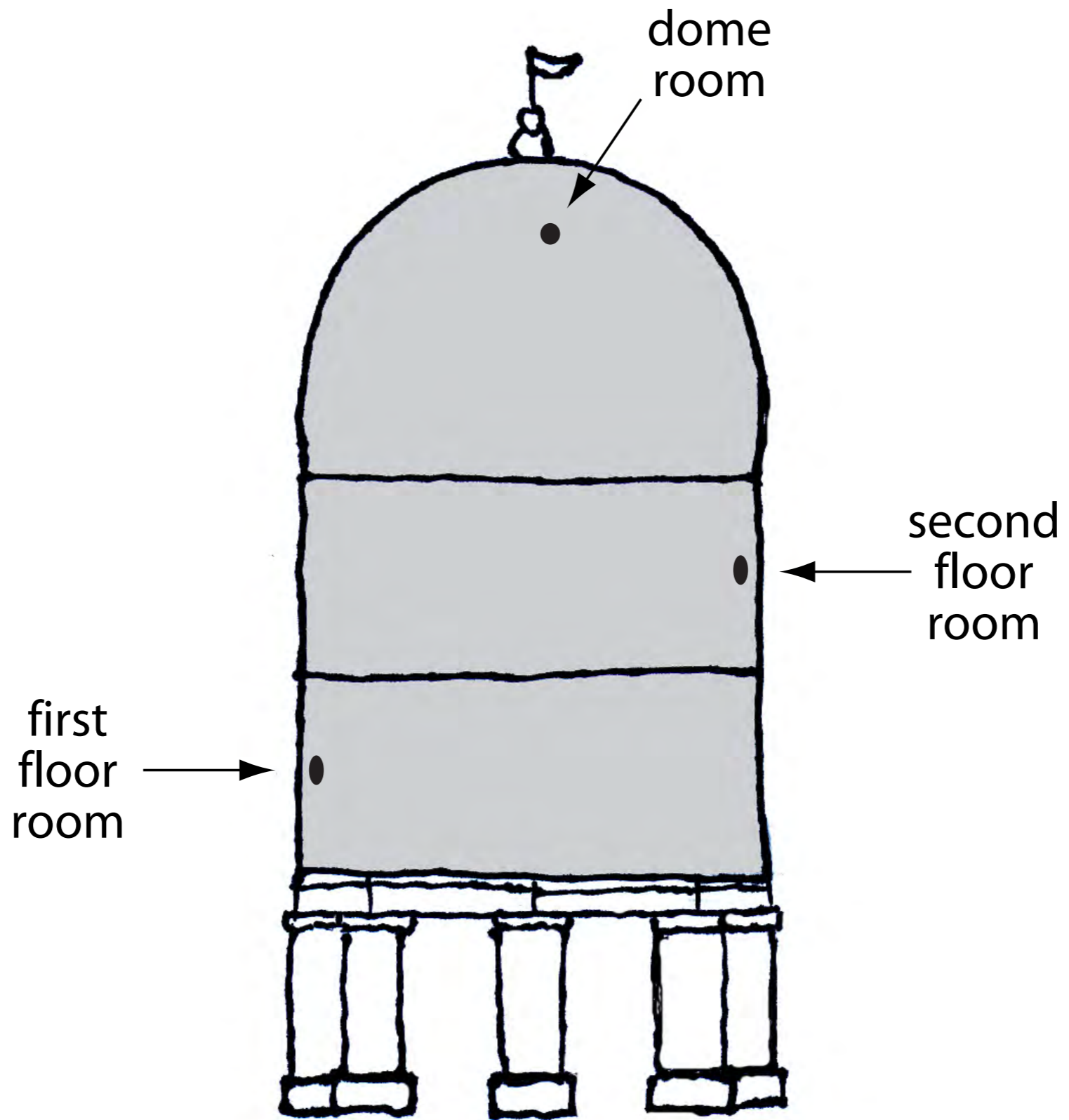




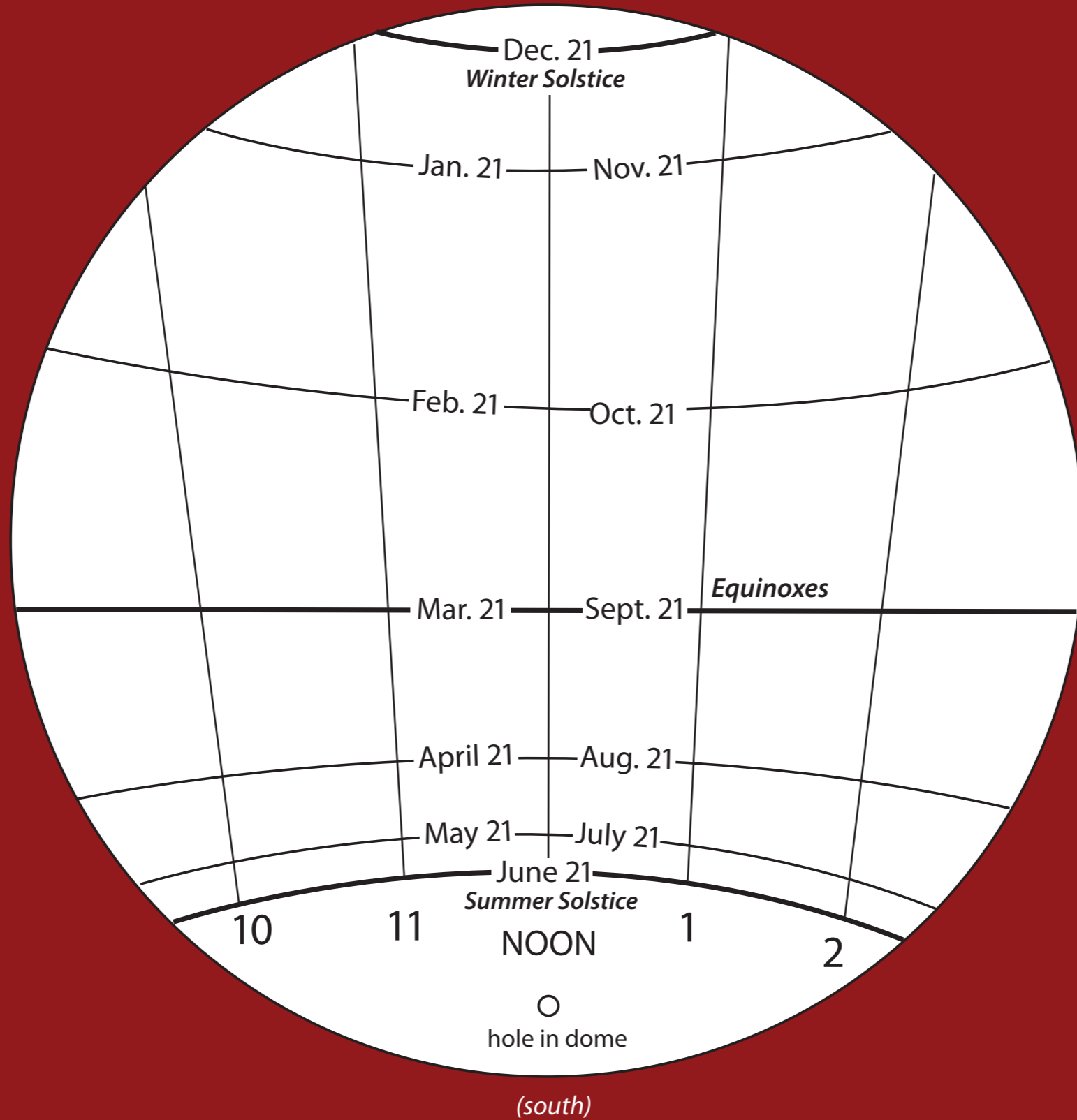




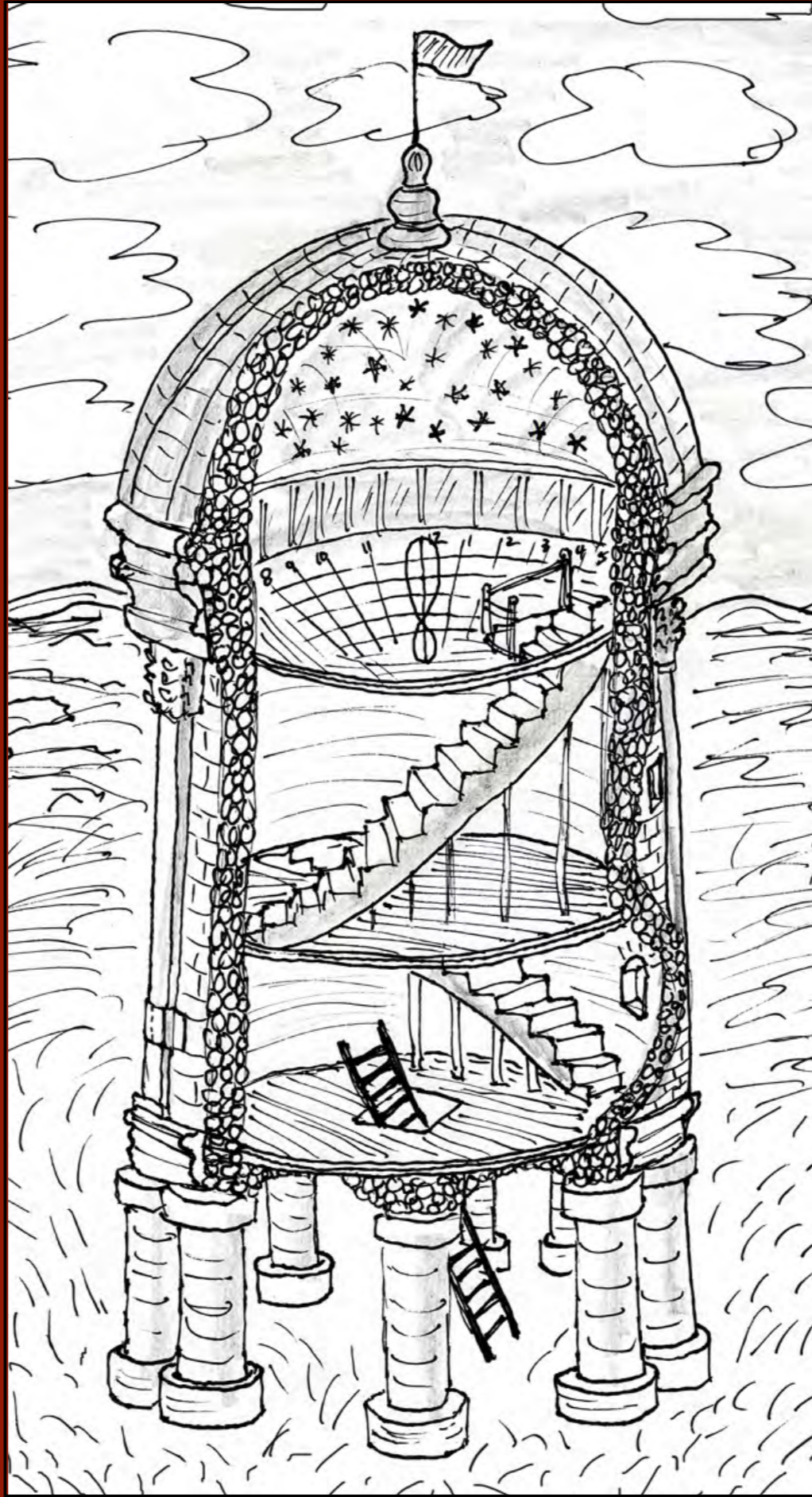




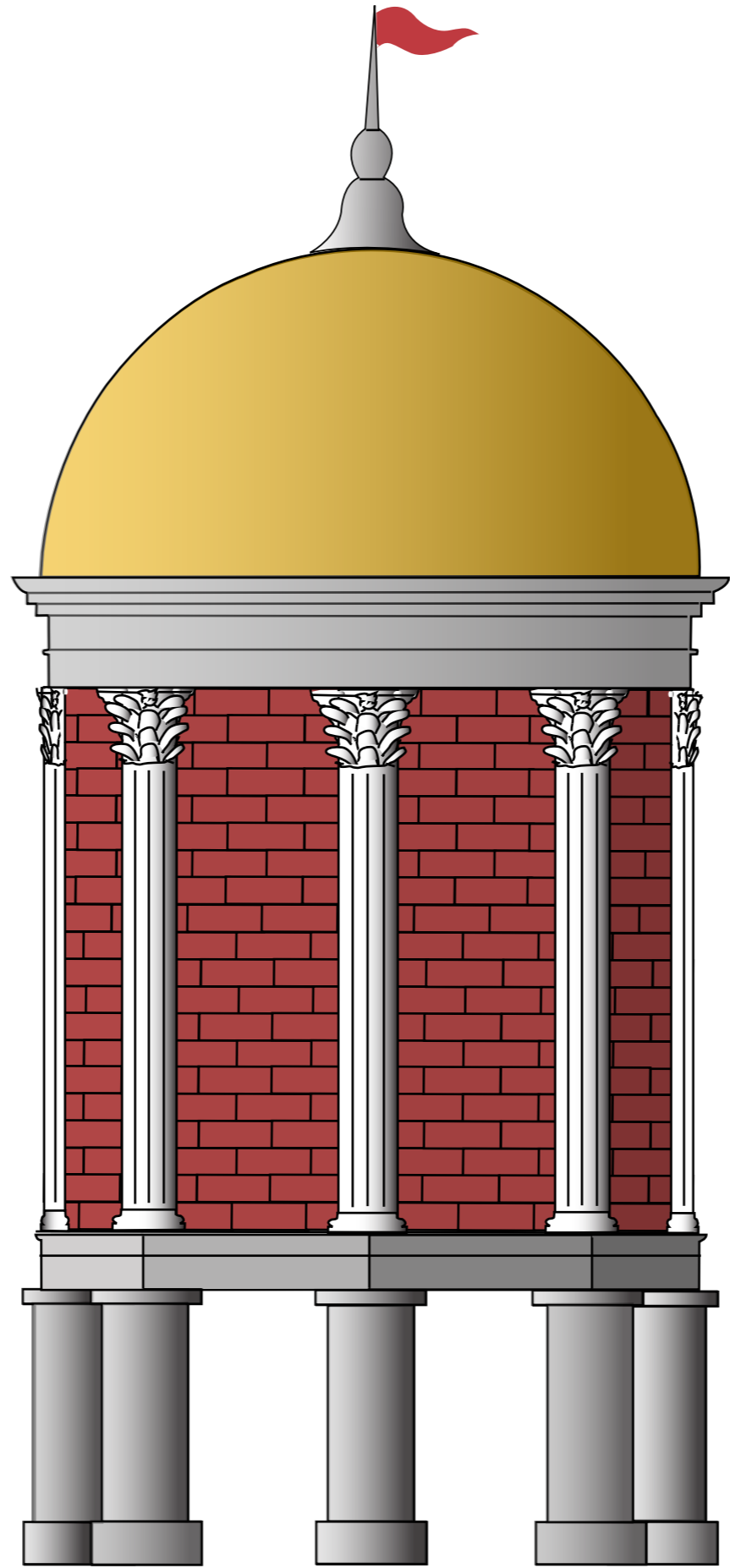
3 camera obscura rooms

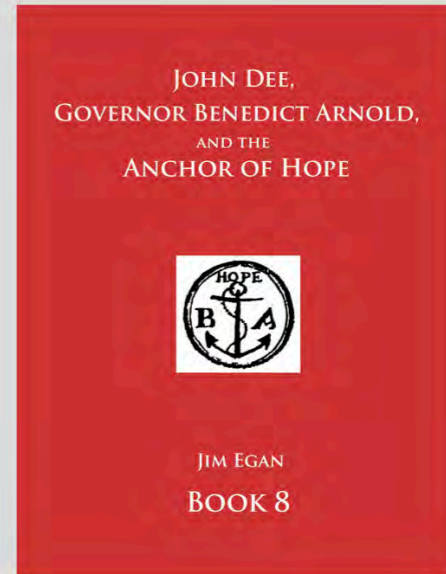
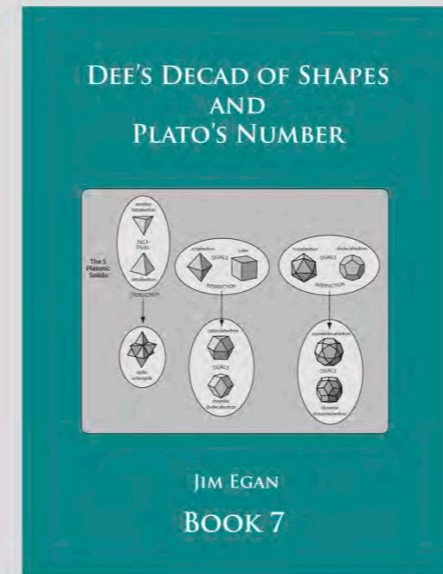
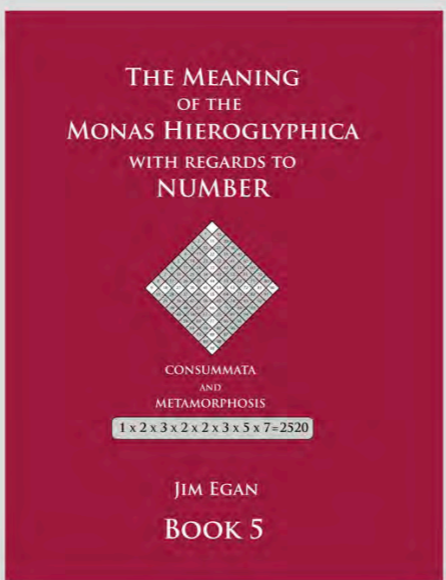
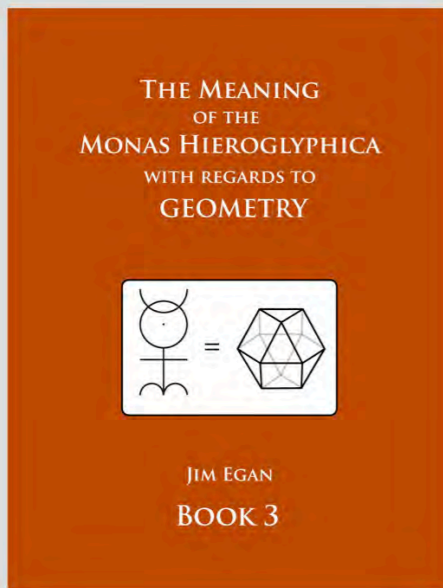
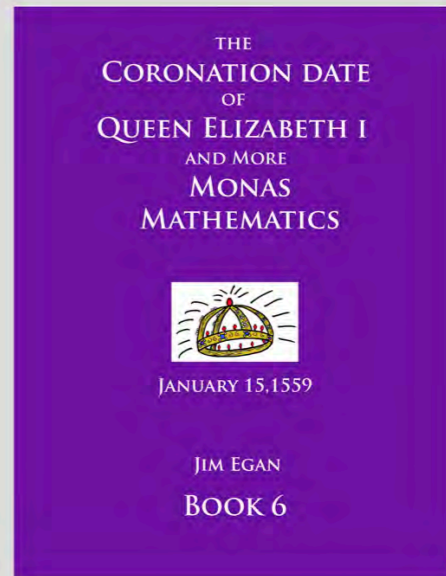
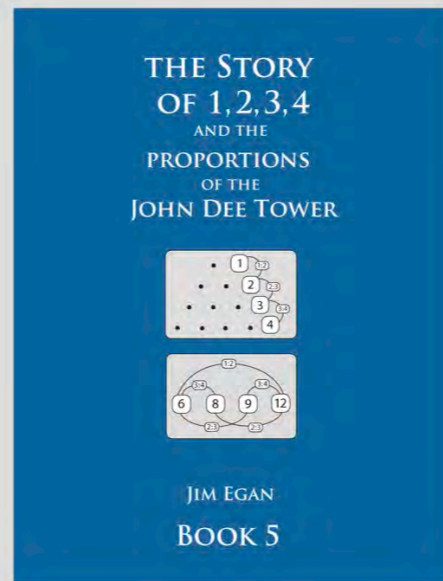
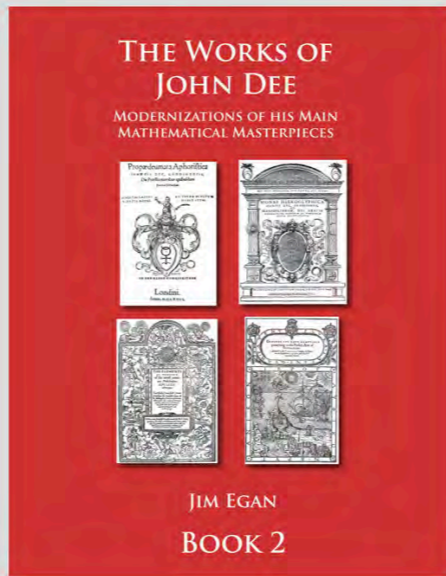
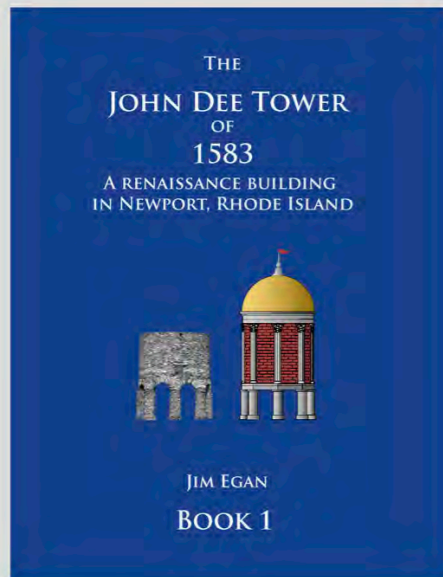


Large Sundial on the Dome Room floor









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