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The first Booke of Architecture, made by Sebastian Serly, entreatyng of Geometrie. Translated out of Italian into Dutch, and out of Dutch into English.

London
Printed for Robert Peake, and are to be sold at his shop heere Holborne conduit, next to the Sunne Tauerne.
ANNO DOM. 1614.
TO THE HIGH AND
MIGHTIE PRINCE

HENRY,
Prince of Wales.

S I R,

O vaine ambition of mine owne Desire, much leffe presumtion of my none Dextert, incited me to present this Volume to your Princely view, but rather, the gracious Countenance, which (even from your Childhood) you haue ever daigned to all good endeavours, invited Mee also (after so many others) to offer at the high-Altar of your Highnesse favoure, this new-Naturalized Wworke of a learned Stranger: Not with pretence of Profit to your Highnesse (who want not more exquifite Tutors in all excellent Sciences) but, under the Patronage of your powerful Name, to benefite the Publicke; and conuay vn to my Countrymen (especially Architects and Artificers of all forts) these Necesfary, Certaine, and moft ready Helps of Geometrie: The ignorance and want whereof, in times past (in most parts of this Kingdome) hath left vs many lame Wworkes, with shame of many Wworkemen; which, for the future, the Knowledge and vfe of these Instructions shall happily preuent, if the event but answere (in any measure) to that Hope of mine, which alone both induced this Desire and produced this Defigne: Wherein I must confesse my part but small, fauing my great adventure in the Charge, and my great Good-will to doe Good. All which, together with my beft Seruices, I humbly prostrate at your Princely feete, as befeemes

Your Highnesse

most humble Servant

Robert Peake.
To the Louers of Architecture.

Vir learned Author Sebastian Serly, having great foresight to shew and explain the common rules of Architecture, did first publish his Fourth Book, entreating of Architecture, and after his Third Book, declaring excellent Antiquities. Fearing that if hee had begunne with Geometric and Perspectiue, common workmen would have thought (that the two former although smal) had not beene so needfull to study and practice as the other: Which friendly Reader, considered, hindered mee long either from Translating or Publishing the two former, being persuaded by sundry friends and workmen, to have defiled my purpose, both from translating or publishing. The which I had surely effected, if I had beene ouer-ruled by their requests and persuasions, alledging strong reasons, that the common Workemen of our time little regarded or esteemed to Worke with right Simmetrie: the which is confused and erroneous, in the judgement of the Learned Architect, if they will follow the Order of Antiquities hereafter ensuing. Wherefore leaft my good meaning, together with my Labour in Translating and Publishing, should not be regarded and esteemed (as worthie) considering it not onely tendeth to the great profit of the Architect or Workman, but also generally to all other Artificers of our Nation: I advise all generally, not to deceive themselves, nor to be selfe-conceited in their owne workes, but well understand this my labour (tending to common good) and be persuaded that who so shall follow these rules hereafter set downe, shall not onely have bis Worke well esteemed of the common people, but also generally commended and applauded of all workemen, and men of judgement. Vale.
The first Booke of Architecture,
made by Sebastian Serly, entreating of Geometrie.

The first Chapter.

Now needful and necessary the most secret Art of Geometrie is for every Architect and Workman, as those that for a long time have studied and wrought without the same can sufficiently witness, who since that time have attained unto any knowledge of the said Art, do not only laugh and smile at their owne former simplicities, but in truth may very well acknowledge that all whatsoever had been formerly done by them, was not worth the looking on.

Seeing then the learning of Architecture comprehended in it many notable Arts, it is necessary that the Architect or Workman, should first, or at the least (if he cannot attain unto any more) know so much thereof, as that he may understand the principles of Geometrie, that he may not be accustomed amongst the number of those workmen, who bear the name of workmen, and scarce know how to make an answer: What a Point, Line, Plane, or Body is, and much lesse can tell what harmone or correspondence meaneth, but following after their owne minds, or other blind con- ductors that have bloud to worke without rule or reason, they make bad worke, which is the cause of much bloud or heavy workmanship which is found in many places.

Therefore seeing that Geometrie is the first degree of all good Art, to the end I may shew the Architect so much thereof, as that he may thereby be able with good skill, to give some reason of his worke: Touching the speculations of Euclides and other Authors, that have written of Geometrie, I will leave them, and only take some flowers out of their Garden, that therewith by the shortest way that I can, I may entreat of divers cutting through of Lines, with some demonstrations, meaning to plainly and openly to let bold and declare the same, both in writing and in figures, that every man may both conceive and understand them, acquainted the Reader not to proceed to know the second figure, before he hath well understood and found out the first, and so still proceeding, he shall at last attaine unto his desire.
Of Geometrie

A Point.

A Line.

Parallel.

Superficies.

Perpendicular.

Obstruct.

Acutus.

A corner or point called Pyramidal, and also Acutus in Latine, is, when two even long straight lines meet or come together at the upper end, as the figure right against this declareth.

And when such a figure is closed together at the foote thereof, with a long straight line, it is then called a Triangle, because it hath three sharp corners.

When a Triangle with two even straight lines, is closed together with a longer line than these two are, it shall have such a some as here you see.
But a triangle which is made of three unlike lines, it shall also have three unlike corners.

When two long and two direct bosome right lines are joined together at the four corners, it is called Quadrangle with equal sides or corners, but when the four lines are all of unlike or contrary lengths, then it is a Quadrangle of known sides, as this figure thebe.

You must note that although all four cornered figures may be called Quadrangle; nevertheless, for that the direct four cornerd figures are called Quadratus: for difference from them, I will name all figures which are like to a table, (that is longer then broad) Quadrangles.

When four even long straight lines are joined together at the corners, they are called Quadratus, which are some cornerd: when you make the two corners thereof sharp, and the other two corners somewhat blunter, then it is called a Rombus.

Although you may turn and make all the figures also right four square: yet the workmen may finde other figures with divers corners. The which (as I will hereafter shew) he may make four square.

When a man with his Compasse draweth a bowle, and after that draweth an other bowe right against it, that is called a Superficies of crooked lines, with two like corners: and then draweth a straight line from the one corner to the other, and from one point of center where the Compasse endeth to the other, another straight line. Whereby he shall finde the right four parts thereof.

But if a man drawe a whole round Line with his Compasse, that is called a full Circle, or round Superficies, and the point in the middle is called the Centre. The bimost line is called Circumference: and if you draw a straight line through the Centre, it is called a Diameter; because it divideth the Circle in two even parts.
Of Geometric

When the halfe Circumference is set through the Center of the Diameter, then it is called halfe a Circle: and if you make a straight line upright in the halfe Circle, then that line makes two even quarters of a Circle, and denoted the Diameter also into two halfe Diameters.

When four straight lines is set downe in order, and (is) soe longed, they shall make a perfect square: and if you set one of these lines frome one corner to the other, it is called Diagonums, because it doth the four corners into two equal parts.

Nowe when a trowemmn hath seene a figure or some of the most necessary Superficies, hee must passe further, and learn to augment or diminish the fame, and to turne them into other figures: but yet in such sort, that they may have equal parts in them.

And first, if out of the length of the Diagonums abovediscussed, by the adding of three other equall lines, hee maketh another square square: that square square that hee once as great againe as the first, which is to bee understood in this sort: That is square of A. B. C. D. by the Diagonums is broken into two Triangles, and the greater square square A. D. F. E. containeth square such Triangles: but for that the two first squares hang one within the other, therefore of the better the worse thereof, they are here once againe set downe generally; whereby you may see that the Square G. (as I have before) containeth two Triangles, and the Square H. containeth four such Triangles, so that the poore thereof is clearly to be seen.

If within a square square you make a Circle which toucheth the square square of the said square square, and without the said square square an other Circle which toucheth the corners marked A. B. C. D. then the outside Circle must be once as great againe as the innermost: and then if about the greatest Circle you make another square square as C. D. E. F. then the two square squares must in like sort be once as great againe as the other. The poore figure of sundrie hereby marked with the letters K. L. for clearer discernement.
By this also, the proportion of the sides of the
Scales of the Tempeste Columnnes of Pillars,
and also the breadth of the foundation of them under
neath by Heretimus declared, is set forth.

The first Booke.

The first Chapter. Fol.3.

Tygoodman must yet proceed further and
learn to know how to change a Triangle in
a Quadrangle, and also at last bring it to a right
Quadrangle, to the which I will set downe divers
forms. But, take a Triangle with even corners, as A B C, and divide the Sable (which
is the name of all lower lines) B C, in two even
parts, and there place the letter E. Then from the
point E to A, draw a line, which will divide the
Triangle into two even parts. Then if you take
that part which is marked A, E, C, and bring it to
the other part, marked A, E, B, it will make a
Quadrangle, as A, D, B, E, made of a Triangle.

You may also change this Triangle in other
manner, dividing the lines A, B, and A, C
each in two like parts as F, and G. Then draw
a line through D, E, as long as the Sable B, C.
Then that by the two Equidivances, corner under
and then the Quadrangle B, C, D, E, containeth so
much in it as the Triangle A, B, C, and the prove
thereof is, that the two Triangles B, C, F, and
G, E, C, contain so much in them, as the two oth
er Triangles A, F, H, and A, G.

A Triangle with even points, may be divided
into two equal parts, dividing each line
into two parts, as in the figure P, Q, R it is done
through the three lines, which on either side make
two great Triangles.
Of Geometric

The same Triangle P.Q.R. may thus be changed into a Quadrangle by drawing the side P.Q. and the side P.R. each in two equal parts, then draw a line S.T. as long as Q.R. and then draw a line direct bournward from T.R. to close it up: and then that Quadrangle containes as much space within it as the Triangle ABC, because that the Triangle which is cut off P.S.V. is of the like greatness with the other Triangle marked V.R.T.

Although there is a Triangle of unequaal sides, yet a man may make it a Quadrangle, in such sort as I said before of the right Triangle; so although the two Triangles that are cut off, and those two that are added into it, are not of one greatness, yet the Triangles A.P.I. and B.D.F. are one as great as the other, and again, the Triangles A.G.K. and G.C.E. are also of one greatness: so that these that are cut off, and those that are added therunto, are of one quantity. By these alterations at random, a man may easily measure how many feet, ells or rods four square, are contained in a three cornered superficies.

But if it farther be, that a Triangle (which is a cornered) superficie or plane, must be parted Christwise in two equal parts; then out of one of the sides that you shall cut through, you must make a right square space, as from the side A.B. and make the line in two Diagonals from corner to corner, which shall be the Center C. and draw one Circle through that three cornered part which you will divide, and so you shall find the two points, where you shall place your building line. He that desires any piece hereof, may take each piece and alter it into a Quadrangle, and alter into a Quadrangle, as hereafter shall be shewed, and he shall find it true.

Architectors must also undergo other burdens, so that he must know how to divide a piece of ground, that no man may be hindered thereby. As for example, if there were a piece of ground that lay this cornered side, with unequaal parts, having on the one side thereof a Well, but not in the middle: and this ground, or this cornered piece of Land is to be divided into two equal parts, in such sort, that each of them may have the use of the Well; it must be done in this manner. I make a Triangle marked A.B.C. and the Well is marked G. Now divide the line B.C. with a straight line in the two equal parts as the letter D. then, and then draw a line from D. to A. then the Triangle to divided into two equal parts: but both of them cannot yet come to the Well; then draw another line from the Well G. to A, and, from the point D. you must set an Equidistance against G. A marked with E. drawing from G. which is the Well; the black line to the letter E. it will divide the ground in two equal parts, and each of them shall have the Well at the end of his ground, so that part A.B.G. E. contain in it as many lots as rods as that part which is marked G.E.C.
The first Booke.

The Hrft Books*
The first Chapter. Fol. 4.

I shall before, how a man should make a four square superficies once as great again as it is, but it may fall out, that a man is to make it but half as great again, as more or less, as he thinketh good, as occasion serueth, which the Architect is also to learn of necessity, which the Statu, set downes a right square square thing, marked A. B. C. D. which I will have three quarters greater: the same three quarters I let by the side thereof, so that the same with the square aquare together make a Square a, A. E. C. G. To bring this Square into a right Square, you must lengthen the line A. E. get a quarter longer, or from the side of the Quadrangle E. G. and place F, there; then upon the line A. F. make half a Circle: which line will shew you the one side of the Square which you seek for; which Square being made, will contain as much in it, as the Square already made: And in this manner you may change all Squares which are long square corner pieces of Booke, into a short and true Quadrangle.

Now to prove that, which I spake before, you must copy the Square with the Square together; in one four square superficies as Q. R. S. T. and from the corner K. to the corner S. draw a Diagonal, and it is certaine that that Diagonal will make two even parts. Now Cicero hath, that when a man taketh any even parts from even parts, the rest of the parts also remaine alike: But take the Triangle K. L. and the Triangle M. N. which are both alike, the right square corner superficies P. is of the same greatness, but the longer superficie Q. is,

A Sine, you may easily change a Quadrangle into a Square, as long as an arrow as you desire to have it, draw from hence your Quadrangle A. B. C. D. and lengthen your line A. B. and the line B. C. Which come, then let the length of the Quadrangle, which you desire to have, from the line A. C. Then from the point C. draw a line as long as the corner of the Quadrangle D. to the line C. F. and there you find the shortest line of the Quadrangle, and so to the contrary you shall by the least line of the Quadrangle, and the longer is also, as you may also prove by the four-square Figure: for when you take away the Squares M. N. and O. P. which are both alike, then the two parts which are K. L. are also alike.

An
Architects may by chance have a piece of wood of various unequal sides came to his hands, which he is to put into a Quadrangle or Squared frame, to know what it contains, and specially when it belonged to more than one man, whether it be Land or any other thing. For although the Architect or Surveyor of Land could not feel of Arithmetic or Ciphering; yet this rule cannot fail him, nor any other man that desires to find out the degree of a Triangle. Thus, as then, let it bee thought some lesser it will, I let shewe this hereafter following.

First, then, seeks the greatest Quadrangle or Quadrangle, that you can take out of it: that done, seeks yet another Quadrangle or Quadrangle, as big as you can take out of it, out of the rest of the said wood; and if you can after that make more Quadrangles or Quadrangles out of it, I shewe all with right corners, take them out also: but if you can find no more in it, then make Triangles also as big as you can, of which Triangles (as you are taught before) you may make Quadrangles, and let every piece severally be marked with Characters, as in the figure following may be seen.

Let by example your many cornered figures first be marked with the great Quadrangle with these letters A, B, C, D, and then with a lesser Quadrangle, as E, F, G, H, the rest are all Triangles. So let the greatest Quadrangle L in a place by it selfe, and then the other marked with M, which set upon it, that the line corners as lines may be alike: which done, lengthen the line E, F, and the line G, and where they lay a touch under the great Quadrangle L there set an L from this to a Diagonal line, being drawn throught the corners B, H, the same line shall be drawn to the point: that by the shutting of the Characters B, M, L, D will shew you another Quadrangle, of the like quantity that the Quadrangle M is to that the whole Quadrangle D, C, L, M, containeth the two aforesaid Quadrangles. Touching the Triangles, when you have changed the same (according to your former instruction) into Quadrangles, as you may see by the Triangle N, to may you put that Quadrangle also in the greatest Quadrangles (so lesser triangle) the great Quadrangle A, L, M, C, is once again placed there with the small Quadrangle O, P, Q, R, set upon it, and the Diagonal line is placed the greater (which is L, M, T, S, both marked with N, so that the Quadrangle A, C, S, T, containeth these Quadrangles L, M, N, rules many eyes, as there are; yea you may in this last bring them all in one Quadrangle; if these latter are pyramed lines, the the skill of the Architect or workman may almost bring them into a square, and these Quadrangles, if need be, may also be reduced into perfect square, squares, as always.

Of Geometric
Of Geometric

When a man hath a line or other things of unequall parts, and there is also another longer line, or some other thing, which a man would also divide into unequall parts, according to the proportion of the shorter line, then let the shortest line be A.B. and the greatest line A.C. now it is necessary that from the uppermost point A. you should make a corner as A.B. and A.A. Then take your longer line, and let it with the end C. upon B. and let the other end rest at the hanging line A.A. then from every point of the uppermost line A.B. let a hanging line fall upon the line A.C. so that they may be equidistant with the line A.A. and where by said lines cut through each other, there is the right division proportioned, according to the smaller. This rule shall not only serve the Architect for many things, as I will partly shew; but will also serve many Artificers to reduce their small wages into greater.

For example of the figure aforesaid, if a space, House or pieces of Land to be of divers wideness, which should be narrower before than behind. Which Houses, by fire or incense is decayed, that in the space between C.D. there were but some figures at division to bee seen of the houses, and behind the houses between A. and B. no figures at all to bee seen. Now as the misfortune was past, and that every man desired to have his part of his inheritance, then the Architect, as an umpire, according to the rule aforesaid, should divide the longer line according to the proportion of the shortest, to give every man his own as you may see by this Figure following.
The first Booke. The first Chapter. Fol. 5.

The Architect must have a well proportioned Comice, which if he would make greater, keeping the same proportion, he may do it as he is formerly taught, as in this Figure following is shewed by the short line marked A.B. and the longer line marked A.C.

A Architect as workman, must likewise learn to augment a make greater a hollowed column, which he may also do by the two lines above, and although the Column should be a Dexta (yet it is to be understand of all kinds of Columns). This rule will also serve (not only for) the three figures set downe but also for as many, as if I should draw them, it would contain a whole booke of them alone, and therefore this shall last as this time for the workman.
The further that any material thing standeth from our sight, so much it seemeth to increase, and diminueth homine of theapse, which continueth our sight: therefore when a man will make or place one thing above another, against any place or wall, he would have the same thing to show above in the middle, and beneath, a great in one part as in the other, it is convenient for him to follow this rule, which is, so that our sight runneth in circumference; therefore a man must first place the place, from whence he will see the same; there placing a Center, and then draw a quarter of a Circle from your eye forwards. Which being in even parts, you shall, by the lines that go out of the Center through the Circle against the wall, find the binequal parts: the which although they are against the wall, they shall seem greater yet in your sight they will shew all of one greatnesse. By this rule you may also measure heights, saying your self with the numbers.
Many men are of opinion, that straight lines, in what manner soever they are closed, contain as many spaces one way as another, (that is to say) if a man had a cord of forty four fole long, and should lay it directly, in a round long, thin, corner, four square, or slue corner square, but the linter sizes are not of one self same space, which may be seen by these four square figures following, for the first line halved on either side ten, which is forty; and the space contains ten times ten, which is an hundred. The other line upon the two longest sides contains fifteen spaces, and on the shortest sides five, making fifty also: but these times thirteen make but seventy and four.

If the Square be stretched further one, so that the two longer sides were eighteen a piece, then the shortest side must each have two to make forty upon the one, but the space on the contrary but five and thirty. And hereby you see what a perfect Sume may one against an imperfect. And this rule the workman shall use, that he may not be deceived when he will change one figure into another.
Of Geometric

If a man should make the points (which should not stand upon a right line) and desiring to have a circumference made, the compass must pass along by each of these points. To do it from the point one, to the point two, the point equal a line, and from the point two, to the point or another: which two lines shall each of them be divided into two equal parts, and setting the squares half way in the m, as you see it in the figure, by that cross it will show you the Center, wherein you must set one rate of the Compass, and with the other draw the Circle through all the said points.

You may find the Center of these points another way, without your Compass, making a two comend superficie from the one point to the other, through the which Centers two straight lines being drawn long enough downwards where they cross one over the other, they will show you the Center of the these points.

But for a workman holds this to be superfluous and a thing of no moment, it may be that a workman may have a piece of a round ivory to the, which he is to profaut and make full comp by this rule: he may make the Center, Circumference, and Diameter thereof, as the figure sheweth,
WEH in antiquities, and also in modern works, many pillars or columns, which herein in the layout of the bases are broken slender, which is, because their bases were not well made according to their corners: if else, because they are not rightly placed: so that they have more weights upon them on the one side, than on the other, whereby the columns break, which the workman by knowledge of the lines, and help of Geometry, may prevent in this manner: That is, he must make the pillar round bodenly, and his base hollow inward: so that when you place the pillar by the hand, it may presently settle itself without any part. To serve this countnesse, you must let the one point of the Compass be on the highest part of the pillar that is under the A, and the other point three of open B, and then place, as you shoule it about C, and that shall bee the room nexe, making the hollowing of the base, according to the same measure: you may doe the like with the Capital, as you saw in the pillar pyt.
Of Geometrie

If a workeman will make a Bridge, Bow, or any other round Arched piece of worke, which is broader then a half Circle, although sometimes practise this with their lines, whereby they make such kinds of workes, which shew well to mens sight, yet if the workeman will follow the right Theories and reason thereof, he must observe the order heretofore showed. When he hath the dilution of the height, then he must make halfe a Circle out of the middle; after that, upon the same Centre, he must make another lesser Circle, which must be no greater then he will make the height of the Bow or Arches; then he must divide the greater Circle in equal parts, which must all be drawn with lines to the Centre; then you must hang out other Perpendiculars upon your Lead: and where the lines that go to the Centre cut through the lesser Circle, from thence you must draw the crooked lines towards the Perpendicular, and where they close together, there the Bow or Arches which is made, shall be closed: as by the points or prickes hereunder is shewed.

But if you desire to make the Bow or Arches lower, then you must follow the rule above said, and make the innermost Circle so much lesser, which is to be understood, that the more parts that you make of the greater Circle, so much the easier you shall have the crooked lines which you would have: from this rule there are many others obser-
The first Booke. The first Chapter. Fol.9.

Calling the former rule to mind, I devised the manner how to frame and fashion divers kinds of vessels by the same, and I think it not amiss to let downe some of them: This only is to bee marked, that as tode as you will make the vessels tothin, so great you must make the loutermost Circle. The rest, the skilfull workman may make by the figures, that is, how the lines are directed to the Center, and the Parabolas, and out of the small Circle. The Perpendiculars hanging, the vessels are shaped: the foote and the neck may be made as the workman will.

But if you will make the body of the vessel fuller, then you must make the outer Circle so much the greater, and make the belly hanging lower, under it, so t'ou're the great Circle, by the falling of the Perpendiculars up the crofet line, as by these figures 3, 4, 5, it is showed: (whereby a man by this meanes may make divers vessels, differing from mine). The necks and spouts of these vessels are within the small Circles: the other members and Ornaments are always to be made, according to the will of the ingenious workman.
Of Geometric

It is an excellent thing for a man to study or practice to do any thing with the Compass, whereby in time meaning I find out which they never imagined: as this night it happened unto me, for that seeking to find a more rule to make Pyramids of an Egg, then Albertus Durensis hath set downe: I found this way to make an Intertie vessel, placing the base beneath the foot of an Egg, and the necke with the handles above upon the thickest part of the Egg. But first you must frame the Egg in this manner: Make a straight cross of two lines, and divide your cross line in ten equal parts: that is on each side five. Then, set the Compass upon the Centre A, and with the other parts thereof, draw in two parts, that is, to C, making half a Circle upwards. That done, set one foot of the Compass upon the point marked B, and with the other put in the utmost point C, drawing a piece of a Circle downwards toward the perpendicular, and being the like on the other side, you must make a point below. Then take the half of the half Circle above that two parts, and place it at the utmost point of the perpendicular upwards above O, where the Centre to close the Egg, shall stand: the rest under I, "be for the base: the necke, without doubt, may be made two parts high, and the rest according to the workmans pleasure, as according to the figure hereunder set downe.

You may also make another forme of a Cup or vessel, after the rule aforesaid. But from the point A, (which is both turn the breadth of the foot, and the widith of the mouth,) you must make your Circle upwards, from C, into the two Perpendiculars, where the body shall be closed by. The necke bending above it, shall be two parts high; but the rest of the workmanship shall be made according to the will and desires of the workman.
By this means you may make other different kinds of Cops or vessells: but these that follow, you must make in this last: you must bend the Your crooke: line in twelve parts through the point A, making two perpendiculars to show the base and the necks: then letting one foot of the Compasses upon B, and the other foot upon I, drawing a piece of a Circle bove-wards, towards the perpendicular: and the line being done on the other side to the Figure of 2, then place your Compasses upon the point C, and touching the sides 3, and 4, then the bottom of the vessell will be closed by: then place the Compasses upon the point between I, and A. and it will bee the roundness of the vessell above: the other four parts serve for the necke of the vessell, with the rest of the works.

A man may make a vessell only by a Circular forme, making therein a Circular crooke, and bending every line in to see parts: the halfe circle shal be the belly of the vessell, and a first part upright; for a Factice, that there may be more place to beautifie it: an other part shall be the height of the necke, and another part the inner: and for the base, although it be but a halfe part high, it may well goe a first part without the round: and although I have set downe but six manner of cups or vessells, yet according to the rules aforesaid, a man may make an infinite number of vessells, and a man may alter them by their Dynamites, wherefore I say nothing, that you may set the line the better.
Of Geometric

A man may make Double figures in divers fashions, but I will only set double figure. To make this latter figure, you must set two perfect triangles one above the other, like a houmub, and at the footing of them together you must draw the lines through to 1, 2, 3, 4, and the corners A, B, C, D shall be the base. Then let one side of the Compasses upon B and the other upon I and draw a line from thence to the figure. After that, from the point A and 3, 1, 4, you must also draw a line which being done, set the other end of the Compass in the point C, and then draw a piece of a Circle from 3 to 1, and again, the Compass being in the Centre D, draw a piece of a Circle from 3, 1, 4, and then the figure is made. You must also understand that the nearer that the figures come to their Centers, so much the longer they are and to the contrary the further that they are from their Centers, the more perfect they are yet they are no perfect Circles, because they have more than one Center.

For the making of the second Double, you must first make these Circles, observing thereby drawing, where seven straight lines stand the four Centers shall be I, K, L, M. Then placing one point of the Compasses in K, you must draw a line with the other point from the figure of 1 to 2. Against without altering the Compasses, you shall set the one side of the Compasses in I and draw a piece of a Circle from the figure 3 to the figure 4 and that make the Compasses of the Circle. This Figure is very like the figure of an Egg.

The third figure is made by two four cornered squares, drawing Diagonal lines in them, which shall be the two Centers G, H and the other two the corners E, F. Then make a piece of a Circle from F, to the figure 1, and 2, and 3, the line from E, to G, and 4, which bone from the points G and H, make the line first from 1, 2, and 3, and then by the Scale.
The first Book.
The first Chapter.

If you will make this fourth Duke, then make two Circles that may cut through each other's Center, the other two Centers for the closing of the Circle be N.O, after that, whether you draw the right lines or not from the points O.N. you shall draw that by the lines from 1. and 2. and from 3. to 4.

And although our Author saith, there are four series of Dukles: yet this last figure is of the same figure as the first, only this is easier to make.

Duching the Circles, there are many figures which are round, and get some lines 5.6.7.8.9 and 10. corners, &c. But at this time, I shall speak only of these two primarily, because they are most common.

This Pentagon, or eight points, is taken out of a right square corner square, drawing the Diagonals which will shew you the Center: then let one face of your Compass upon the centers of the Squares, and leading the other face through the Center, drawing your Circle toward the side of the Square, there your eight points shall stand to make it right corners; and although a man might only do it by the Circle, making a cross therein, and dividing each quarter in two, yet it will not be so well, and therefore this is a faster and more perfect way.

The Hexagon, that is, the last required Circle, is readily made in a Circle: as when the Circle is made, you may divide the Circumference in five parts equally, without altering the Compass, and drawing the line from one point to another, the five corners are made.
Of Geometrie

The pentagons that is five corners, is not so easy to be made as the others are, because it is of an uneven number of corners, notwithstanding you may make it in this manner: when the Circle is made, then make a straight crosse thereof, then divide the one half of the crosse line in two parts, which is marked with the figure 2; then place the one scale of the Compasses upon 3, and with the other, placing it under the crosse, divide the same line into 3 parts. From thence also from under the crosse you shall divide the length of every part of the pentagon. In this figure also you shall divide the Pentagon, that is, ten corners: for, from the Center to the figure 2, that shall be one line thereof, you may also make a figure composed thereof out of this pentagon 1, 2, and place a particular line upon the point 3. And Albertus Euclidus saith, that the same also will serve to make a lemn tricorner figure.

This figure will serve such men as are to part a Circle into unequal parts, how many corner they be but not to bring the Reader into confusion: when making of many figures, I will naturally do where this is divided into many corners, which shall serve for an example of all the rest, which is this: Take the quarter of the Circle, and divide it into nine parts, and four of these parts will be the ninth part of the whole Circumference: you must also understand the same so, if you divide a Compass into eleven, twelve, or thirteen parts, or, so that always four of these parts be the ninth part of your parts required.

There are many Quadrangle propositions, but I will here set down but one of the principal of them, which shall serve for the use of the workman.

First, the figure is called a right square quadrangle.

The second figure of figure in Latin, is called Squinquartus, that is, which is made of a four corners Quadrangle and an eighth part thereof joined onto it.

The third figure in Latin, is called Squinquartus, that is, made of a four corners Quadrangle, and a third part thereof joined onto it.

The fourth, is called Diagram, of the line Diagram: which line divideth the four square Quadrangle crosse through the middle, which Diagram line being toucht from under to the extremity upwards with the Compass, and so drawn, will there be the length of the Diagram Quadrangle: but from this proposition there can be no rule in number well set down.
The first Booke. The first Chapter. Fol. 12.

The first figure is called a Squautea-
tern, that is, a four square, and half of one of the four squares added to it.

The first is called Superimposition of
that is, a square, and two third parts of one of the four squares added thereto.

The seventh and last figure, is cal-
led Dupla, that is, double: so it is
made of two square squares
joined together: and we finde not in
any Antiquities, any figure that posseth the
two square squares, unless it be in Gall-
eries, Entrances and other to be walked in
and some gates, doors, and windows have
both in their heights: but such as are walls
will not passe such lengths in Chambers
of Halls.

Many accidents
like unto this,
may fall into the mas-
ters hand, which is,
that a man should lay
a fellow of a house in
a place which is six-
tate fote long, and
as many fote broad,
and the rafters should
be but fourtane
fote long, and no
more broad to be less
therein such cases, the
binding thereof shall
be made in such lost
as you see it here let
downe, that the raf-
ters may seeme and
this will also bee
strong enough.
Of Geometric

It may also fall out, that a man should have a Table of ten feet long, and three foot broad: with this Table a man would make a doore of seven foot high, and some four foot wide. How to doe it, a man would take the Table long wise in two parts, and setting them one under another, and so they should be but five foot high, and it should be seven: and againe, if they would cut it three foot shorter, and to make it three foot broad, then the one side shall be too much paper. Therefore he must do it in this sort: Take the Table of ten foot long, and three foot broad, and marks it with A. B. C. D., then take it Diagonal wise, that is, from the corner C. to B. into two equal parts, then draw the one piece thereof of these footes backwards towards the corner B. then the line A. F. shall be four foot broad, and to shall the line E. D. also hold four foot broad: by this measure you shall have your doore A. E. F. D. seven foot long, and four foot broad, and you shall get howe the four corner pieces marked E. B. G. and C. F. and C. left for some other use.

It happened many times, that a workman hath an eye or found himself to make in a Church, as in ancient times: they bade to make them, and he doubted of the greatnesse thereof, which if he will make after the rules of Geometry, he must first measure the breadth of the place where he will set it, and there he must make a half Circle: which half Circle being inclosed in a Squaungale, then he shall find the Center by the Diagonal lines: then be must draw two lines more, which shall reach from the two lower most corners above the Center, and touch the left halfe of the Circles above; and where the two lines cut through the Diagonal lines, there you must make two perpendicular lines, which perpendicular lines shall show the widnesse of the desired window: the left about it, may be made the left part of the Diameter, being round in breadth.
...
The second Booke of Architecture, made by Sebastian Serly, entreating of Perspective, which is, Inspecktion, or looking into, by shortening of the sight.

Translated out of Italian into Dutch, and out of Dutch into English.

LONDON
Printed for Robert Peake, and are to be sold at his shop neere Holborne conduit, next to the Sunne Tauerne.
ANNO DOM. 1611.
The second Booke.

A Treatise of Perspective, touching the Superficies.

The second Chapter.

Although the subtil and ingenious Arte of Perspective is very difficult and troublesome to set down in writing, and specially the body, or model of things, which are drawn out of the ground: for it is an Arte which cannot be well expressed by figures or writings, as by an understander, which is done feuerally: notwithstanding, seeing that in my first Booke I have spoken of Geometry, without the which Perspective Arte is nothing; I will labour in the briefest manner that I can, in my second Booke, to shew the workman so much thereof, that he shall be able to side and help himself therewith.

In this work I will not trouble my self to dispute Philosophically what Perspective is, or from whence it hath the original: for learned Euclidis written dryly of the specification thereof.

But to proceed to the matter, touching that the workman shall have cause to use, you must vnderstand, that Perspective is that, which Vitruvius calleth Seccigraphia, that is, the vnder part and sides of any building or of any Superficies of bodies.

This Perspective then, consisteth principally in these lines: The first line is the Base below, from whence all things have their beginning. The second line is that, which goeth or reacheth to the point, some call sight, others, the horizon: But the horizon is the right name thereof, for the horizon is in every place whereon a Sight endeth. The third line, is the line of the distances, which ought always to stand so high as the horizon is farre or nether, according to the situation, as when time serefull, I will declare.

This Horizon is to be understood to stand at the corners of our sight, as the workman would draw a piece of worke at a flat wall, taking his beginning from the ground, where the feete of the beholders should stand. In such a case it is requisite, that the Horizon should be as high as our eyes, and the distance to see or behold worke, shall be set or placed in the firste place thereabouts, as if it were in a Hall, or in a Chamber, then the distance shall be taken at the entry thereof: but if it be within, or at the end of a Gallery or Court, then the distance shall be set at the entrie of the same place, and if it be in a Streete against a wall or an house, then you must set your distance on the other side, right ouer against it. But if in such a case the Streete be very narrow, then it were good to imagine a broad distance, left the thinning fall out to be obtrusive or unpleasant unto you: for the longer or the wyder the distance is, the worke will shew lo much the better and pleasant.

But if you will begin a piece of worke of line or true line high from the ground whereon you stand, then it is requisite that the Horizon should stand even with your eyes: (as I sayd before) but if a man should see no ground of the worke, whereon the vertue of man doeth stand (and a man would work very high) it would not be correspondent with the eyes: in such a case a man must take upon him to place the Horizon somewhat higher, by the advice of some skilfull workman, which maketh histories or other things vpon House, and on or onie foot high above a man sight, which is unfitness. But cunning workmen fall into no such errors; for where they have made any thing about our sight, there you could see no ground of the same worke, for that the notable: Perspective Arte hath trided them: and therefore (as I sayd before) Perspective Arte is very needfull for a workman: And no Perspective workman can make any worke without Architecture, nor the Architecture without Perspective.

To prove this, it appeareth by the Architecture in our days, wherein good Architecture hath begun to appeare and shewed it selfe: For, was not Bramant an excellent Architect, and was he not first a Painter, and had great skill in Perspective Arte: before he applied himselfe to the Art of Architecture? And Raphael Durbio, was not he a most cunning Painter, and an excellent Perspective Artist, before he became an Architect? And Balthazar Peruzzi of Stono, was also a Painter, and to well feene in Perspective Arte, that he could to place certaine Pillars and other Arky works perspectively, hoket such a pleasure in the proportions and measures thereof, that he also became an Architect, wherein he to much excelled, that his line was almost not to be found. Was not learned Sereninum Grego an excellent Painter, and most cunning in Perspective Arte, as the faire worke, which he made for the pleasure of his Lord Francisco Mart, Duke of Urbis, can testify, whom he became a most excellent Architect? Julius Romanus, a scholar of Raphael Durbio, who, by Perspective Arte and Paynting, became an excellent Architect, witnessed the same. Then to come to my purpose, say, that a man must be diligent and vigilant in this Arte, wherein I will begin with small things, and then proceed to greater; vntil I have shewed you the full Arte and matière thereof, as I desire.
The second Book.  The second Chapter.  Fol. 1.

The end that men by small matters may attain to greater, therefore I will begin to shew how to shorten a square coin'd thing, from whence all the rest shall be derived. Then the base of this square thing, shall be A.C. and the height of the Passion (as I said before) shall be determined according to the light, and that shall be P. In a long triangle, as in the figure, the lines be drawn, as the lines of the lines A.P. and G.P. then at the one end of the Passion, you must set a perpendicular line, which is G.H. which done, then divide the base A.G.K. long enough, and this out of the Passion draw a parallel of an equivalent line to the base, as far as you will that the eye of sight shall see the end of which you will look at, for how much the more you will have the square thing to seem shorter, so much farther you must go with your light I, from H, to behold the square thing. And then, taking H.I., for the distance, from the point I, to the corner A. draw a line, and where the line cutteth through the perpendicular line A.G. that is on B, there the termination of the shortering of the square thing still be, as you may see in the figure following. But if you will make more square things one above the other, upon the same Passion at point I, then you must draw another line from the shortest thing, of the square thing, to A.G. to the letter G, and where it cutteth through the perpendicular line also, shall be A, there the second Passion shall begin, and in the last you must draw another line to the point of the distance, and where it cutteth the head, or perpendicular line of D, you shall make the third passion, and the same may be done with E, and so you must go, until you come will under the Passion.

The rule above said is the perfectest, and you may suppose it by the line G.H. which is called the line of the Quadrant: but because it is measured with a greater number of lines, and so more tedious; therefor the rule ensuing shall be shorter, and easier to be done, than the other; for when the Base A.G.K. is done, and the two lines make a triangle A.P.G. then you must draw the parallel of the base G, of the Passion long enough; and as far as you will stand from the book to see it, so far you must let the perpendiculars I.K. from the point G, then you must draw a line from the point I. to the point A. and where it cutteth through the line G.P. there shall be the termination of the first shortened Quadrant: and if you will place more Quadrants upward from that Quadrant, you must do as I said before; and although there be other ways to shorten a Quadrant, yet will I follow this order, as being the best and easiest to be let down in writing.
Of Perspective

A man must also be himselfe into diverse distances and grounds, and therefore you must make the ground following, which is of three Quadrantes high, in this manner. First, you must draw the line A-B, as long as the breadth of the picture shall be; which line or Base, must be divided into so many small parts as are needfull, which being all drawn to the Horizon or point, then you must place the distances so farre as you delight, according to the rule aforesaid; for there is no place to set it in, although it is a length and a halfe from the Base, as you see it marked with P. Which Base, because it is of foure parts, therefore the first Quadrant containeth some small Quadrantes, which are drawn by the line B.D. for where that line cutteth through the foure lines, which go to the point; there you must draw the Parallel over, that thereby the foure Quadrantes may be formed: But if you will see other Quadrantes upon it, new (as before) you must draw another line to the distance D, and where that cutteth through the other lines that reach to the point, that shall bee the termination of the second Quadrant, containing in it also foure times foure Quadrantes. The like must bee done and of the third Quadrant, (and more besides if need bee.) But you must also understand, that the lines marked D. розни

all the distances, as it is taught before.
If you will make a pavement with great Quadrants to be cut to Compassed, with six, seven or eight, as you will term them, then upon A B, you must divide the same or Quadrants, and note them all to the horizon, then you must imagine the distances as you are taught before, and the line D B, being parallel from the point B, to the point of the distances; then by cutting through of the Horizontal lines, it will show the terminations of the Quadrants, Fals, or Bases. To draw the Parallels, then if you will make the lines Quadrants somewhat higher, then you must draw another line to the distances; and where it touches the Horizontal or Parallel lines, there also you must draw the Parallels through, so you must also doe with the third, and the point of the distances of these figures stand as farre from A as the line 20 A B is long. If you will make divers forms in these Quadrants, as Recta, Cylindres, your pyramid, or eighteen pyramids, I will shew the manner of them particularly, because I shall see as here here it as I may.
Of Perspective

This figure is a Quadrant, containing in it a line of an other Quadrant, which with the
points thereof toucheth the lines of the outer
most Quadrant: Whereby it is but halfe so
great as the innermost Quadrant, and I have taught
you in the first Book of Geometrie, and the manner
\textit{to make this}, is thus. First, you must make a
Quadrant (as you are taught before) with his distances;
and in this Quadrant you must draw the Diagonal
lines, and also the right crose lines, whereby you
may easily find the holes, as you see it in the figure
directly against this. In this lat you may make the
Notes in the other Quadrants before let the one, that
is, to make Diagonall and crose lines in them with-
out taking other distances.

If this figure there is a crose between (to make it)
you must divide the least line or Base of the
Quadrant in the parts, of the which five parts,
one part is the breadth of the crose: which breadth
being quarter to the points, the Diagonall lines will
show you the Parallal lines of the crose, to be taken
there.

The right pointed figure you may use in Perspecti\textit{ve} books in different figures, which figures
are all difficult enough: but that I may take
the easiest way so here as I can in this my try-
ting: Therefore I have set down the manner there-
otherwize answered, which is very easily; and that is
this. The Quadrant being made in shortening, you
must divide the Base into ten equal parts, and on
either side you shall leave three parts, and in the
middle square parts, then the two lines being added
to the position, you shall find the terminations of the
Parallellines, by the Diagonall line, whereby you
may take by the right corners, as you may see it in
the Figure.
The Second Booke. The Second Chapter. Fol. 3.

The shortest way to place this fire cornered Quadrant, in perspective figures, is thus: When the Quadrant according to the rule above, is placed in shortening, then you must make four equal parts of the base, whereof two shall be in the middle, and one each side you must leave one, and then draw the lines upwards to the Horizon or points; then you must draw the Diagonal lines, and in the middle where they must together, you must draw a parallel line cleane through, to which you shall give all the points to make this fire cornered Figure.

Now I have shewed how you shall make simple or plain perspective images of four corners, of fire corners, and right square corners: Now I will shew, how you shall make them double, that is, how every simple figure shall have four sides. When you have made a plain Superficies of fire points, according to the rule above, then as much as you will have the hand of one to be in breadth, that you must draw upon the base, and draw that also up to the Horizon; and where the Diagonal lines cut through it, there you must draw parallel lines both lower and abovedown and draw two Diagonal lines more, out of the four internal points as corners of the fire cornered Superficies; and so you shall have your terminations to that or close by your smallest fire points as cornered Superficies. Which second Diagonal, parallel, and horizontal lines are all drawn with pitches, by a difference from the first lines, that you may know them one from another.

Thus you must be done with the right cornered Superficies or Perspective work, upon the figures made within a square, making the Compass of what bredth you will, according to the rule above: to it out of every point or corner of the right square, a small line being drawn to the Center, you shall give the termination to that by the internal right squares and then, when from point to point the lines are two, follow one square; Compasse shall make. This right square compass may bee changed into a round, four by the middle on either side; or else wherefore, over the points or corners; a good workman may easily draw a circled shortening round line with his hand.
Of Perspective

Although I have laid before that a man may make a round Circle about an right square, yet so more searchis
pre may strike this way attaine to a more perfection therein, so that the more points or lines the Circular forme
both, the round Compass or Circle will be the fuller. But to make this Figure, it is necessary to make halfe a
Circle under the Holes, and to divide the Circumference into as many parts as you will, so that they be even;
in this forme the hale Circle is divided into eight parts; so that the whole Circle must bee nine nine parts; which be-
ing done, you must set Perpendicular lines in all the parts of the Circumference, as farre as to the Holes of the chas-
tered Needle, these parts being elevated to the Horizon, and two Diagonal lines drawn in the Dentzane, they by
cutting through the Horizontall of Radiall lines, will shew you the Parallellines. Then if you will draw a little
Diagonal line, beginning at the middle point of the Hole, from the one side unto the other, and so from the one point
unto the other by the going over the points; then the lozenges will be closed, as you see them here; whereby it will
be easy for you to draw a round forme with your hand, so it is impossible to be done with the Compass to make it
thence well. This figure you must be exact in, and you must also understand it well, and so you must shewe that I
gave before this statute, before you proceed farther: so they will serve you for many pieces of worke hereafter raiseing,
as you shall both see and find to be true.
The second Booke.  
The second Chapter.  

When you understand the Figure above set perfectly, then you must proceed further, and that the round Circle also within edge or border, according to the breadth that you will have; you must also make the intermest half Circle, and the above set parts of the great Circle opament towards the Center, will come into the small Circle: the which parts of the small Circle being also set downe in Perpendicular lines with prickes not to darken the other lines, and those likewise that are distant to the Position. Then by cutting through of the Diagonal lines, you shall finde the Parallel lines. To make the intermest shortening a round or Circle, according to the first example set downe, as you may; the first round with perfect lines, and the second with prickes, as you see in this Figure.

But, friendly Reader, you must not be weary to bee long in learning this Figure, or in making it often times, untill you can doe it perfectly and understand it well: for I am sure and certaine, that it will bee very hard unto many men, yet without this, you cannot doe much: and he that can doe it well, shall easily understand and make all the things hereafter ensuing.
Of Perspective

It talleth out many times that a booke man will draw a House both without and within which to doe, he must place the ground in Perspective some, that he may the sooner and better know that by which hee will have some, and to leave the rest on the ground; if then you will place a foundation in Perspective manner, to make it well, you must first let it on a flat forme, that out of that you may draw it into a Perspective forme.

To doe this, I have let doe some kind of open Building, that a man may the easeller conceive it for a beginning, for when a man can doe this well, he may after that place many other and harder things in Perspective some. I need not to take any great pains to write of how this Shortening should bee done, because it is so easilly and so openly placed in a forme that a man may presently conceive it; for that leaving all the lines that goe from the corners and sides of the flat ground to the Wall, which you will make in the Shortening; and the same being drawne up to the Horizon, together with the imagination of the distances; then you may shut or close by the Shortening forme square. Then you must draw the Diagonall lines therein, though drawning the Parallel lines, presently you shall see how to doe the Columnes and pilasters, so that it is impossible to fail therein; and especially to those that doe well con-

ceame and understand that, which I have let doe before.
This Figure following is somewhat harder then that before, but when you goe from the smallest to the greatest, you conceive things the easier, and specially he that will learne this Art; he must not leave nor refuse to exercise any of the Figures before set downe, but must be all the diligence he can to be perfect in them all, and her must also take a pleasure to doe them all, otherwise he that will omit any one, and then another, because he can hardly understand or conceive them (although labour and strive at all times in setting downe these rules to help all difficulties) shall little profit himselfe in this Art. The manner how to place this ground in Perspective or figure, is easie conceaved, without any other demonstration: so you must follow the manner of operation of the figure before set downe, with his advertisement, that the two Diagonal lines evermore direct the worke, together with the Horizontallines: and although a man may thew many somes of grounds that are to bee placed in shortening, yet these two shall suffice for this time, because I have other things to entreat of: for a skilfull workman, by the helpe of these, may some others for his purpose, and such as he shall have occasion to bee. And if he will erect any piece of worke for a show, he must necessarily first measure the Perspective with the same measure that he measureth the ground withal, and then place it in a shortening manner, as when time serueth, shall be shewed.
The second Booke.

The second Chapter.
Of Perspective works, touching Bodies or Masiehe things.

The third Chapter.

Speaking of works which are done by, you know that I have sufficiently spoken. Now I will speak of Bodies which are done by, and first, you know that I have taught before, how you should frame an eight square figure plainly in it selfe; and then, I have showed how you should compose this figure about, with a border or edge; but if a workman will show an eight square figure in perspective wise, as a Well, then he must first make the ground, as if he is taught before, as high as he will, that the top Well shall stand elevated above the ground of same therself: there he must make the same frame once again, painting it to the same Horizon, then from all the uppermost corners of points to the lowest, you must place perpendicular lines as well from the innermost figures, as from the intermest, whereby the thought cutting eight square bodies will be framed, as you may see in the figure heretofore annexed.

I have spoken of the open frame of a Well with eight points as corners, which is necessary to be learned, how to make it, before you make the solid body thereof, as this figure sheweth, which is the same that is before shew- ed, both square and measure, but all the lines which cannot ordinarily be seen, are hidden, and there is so much difference between an open body and a solid, as there is between the model of a mans body, that is nothing but bones without flesh and sinke, and a living body of a man covered over with flesh (although it is hidden under it.) And as these Drawers are much perriete that have seen, and perfectly beheld right Anatomies, then others that only content themselves with the outward bare skin of the Superficies, to it he with Perspective pictures so they that well understand and perfectly beare in minde the hidden lines, they shall better understand the Art then others, that content themselves only with picture of outward Superficies. It is very true that he that a man hath sufficiently experimented, practiced and brooked in his mind these inward hidden lines, then helping himselfe with the principall, he may make many perfect things, without bring all this labour.
The second Booke.

The third Chapter.

F0L7.

In these three figures following, every one is drawn out of the fourth square, in such manner as I have taught before; and they go all these to one portion of point as they should do, or as need requireth; by the which figures any man may help himselfe in many things, as I have further declared: and he that is perfect in these, may make all kinds of round figures, and without knowing of these, he can do little in round figures. For out of these figures you may draw round Solides or Pyramidal Building with Pillars, or without pillars; and also a round upright pair of Bangers: for this figure will shew you how to make the Shapers round, with other things more, and yet not without your owne industry: for the things that by these may be made are wonderfull and infinite, so that you may not weary, and spare no paines till you are perfect in them, because that the bowing of Arches of gates and other things will seeme hard unto you, as I will hereafter show you; notwithstanding that they take their beginning altogether from these.

But if any man that deseth to learne this Arte, will at the first understand these figures, as some bluntly will take upon him to doe it. I believe certainly, he will bee put to an non plus, and overseeth himselfe; but by learning all the former things, he proceedeth into these as well in Geometrie as in Perspective Arte: Then, I say, he is of a very grade understanding, if he cannot understand and conceive these figures, or the figures that hereafter follow.

These three figures, to speake truth, are but doubtes; nevertheless, if you draw perpendicular lines from all the terminations, as well upright as without: then you shall have a through cutting of open body, and the innermost lines covered, then they will be a Massie body: And wonder not, gentle Reader, nor let it be strange unto you, though I doe sometimes make along discourse of some things, for (as I sayd before) they are not only learned by many books and great paines, but it is also necessary that they were drawn unto some men plainerly by shewing them before them, that they may the better consider them.
The second Booke.

The third Chapter.

The first part of great Writers of lan-
ter-falles, that fall toome from high
Hills or Mountains, by reason of their
peaks with great scape and power, when
they enter into a Valley, then sometimes they
run out of their Channels, and so much greater
as they then happen upon the one side, so
much they lose againe on the other side; and so
doth perspective work in several things,
so that as much as a man looketh of the point
or corner wherein he looketh, so much great-
ter the other point or corner thereto that
standeth out, which is shewed in the Figures
hereto annexed.

The Reader must then make that the
square in the middle signifies the thicknesse
of a foursquare Colonne or Pillar, and the
border that is without and goeth about it,
signifies the thicknesse of bearing out of the
Bases and the Capital. The Figure under
this platforme is the Base, and the uppermost
Figure is the Capital; the manner how to
shorten them I shall set you: You must
make the Pillar first before without the course,
and upon it you shall frame the Bases and
Capital, making the Perspective or beaking
out thereof, eitherise alaile, but you must
draw them lightly, as the picture herein set
towne for you: then draw the side of the
Pillar which you shall have gone towards
the Horizon, and having found how thence
the beginning of shortening side shall be, by
the rules here are shewed in the first part
of Perspective book, so you shall have the short-
ening ground of the Pillar, wherein you must
lightly draw the two Diagonall lines long
eough through, and from the Bases below,
which is in the shortening, you must
draw a line towards the Horizon, which you
shall also set gone downe as thence before, till
it reacheth beneath the Diagonall lines, and
there shall be the terminations of the short-
ening Bases: and thus you see that the Perspec-
tivneses which sometime off from them,
that is, the space between the points and the
full blacke line, then from the terminations
to the other uppermost point of the Bases,
you must draw a Parallel line under the
ground of the Pillars, so long that it may
touch the Diagonall lines, and there you shall
find that which is taken of from the Bases
on the one side, and given to them on the
other side, and the Perspective of the Bases
sheweth, that the one point is vertuyne in-
wards, and the other commeth further out,
then the uppermost line of the Bases being
also to the Horizon then upon the shortening
line by a line you finde the third part of the
Bases below, and that which is here spoken
of the Bases, you must understand the same
also of the Capitals.
Of Perspective

The other three figures are the same which are shewed before, the field were hollow, but these are perfect and follow with all their members, and although that in the figures before I have not shewed how you should frame and frame their members, which in truth would be a very confused and troublesome thing to let done in writings therefore I have only shewed the field terminations, that a man may keep them well in his memory, and in these present figures I have shewed how they shew in a man's sight, that you may see the effect that they make: but from here to here because (as I said before) it is a troublesome some thing, I will make another frame of them with all their members by twelve lines: and these (according to my ability) I will let done the manner how to frame the terminations of the members one after another, for all of them grows a little one sure, or more than the other.

But you must consider that these Bases and Capitals are on the one side towards, and on the other side towards, which you must well remember, that you may not bee well instructed herein touching that which you will make. For it is true that the Chalcise consisteth in the understanding: but experience is gotten by practice and right line of handling; wherefore the most notable Painter Leonardo Vinci, was never pleased nor satisfied with anything that he made, bringing but little works to perfection, saying, he could not have thereof was that his hand could not effect the understanding of his mind: And for my part, if I could do as he did, I could not, neither would I suffer any of my books to come forth to (to say the truth) whatsoever I make or write, it pleaseth me not: but (as I said in the beginning of my book) that I have rather exercised in works that small talent, which it hath pleased God to bestow upon me, then suffer it to be and rot under the earth without any fruit, and although I shall not please thereby such as are curious, to let become the grace and perfection of all things, yet at least I shall help some beginners that know a little of nothing thereof, which hath always been my intent.
Of that (as I said before) of Perspective in Perspective Books, it would bee great labour and much thought to find all the terminations of parts or members, and specially because they bee always more greater as they come further outward, as well those which we behold from beneath upwards, as those that we behold from above downwards; yet I have not spared to make this Figure, and to frame and position it with all the members and parts thereof, that you may the better understand it. In the first Figure but one, next to this, I have shewed how you shall finde the terminations of parts of the Perspective which are made plaine without any member; the reader to conceive how things were bigger when they come further outward. But now I think that men understand it well, I will shew the manner and shew how to find the enlarging of all the members particularly by themselves, every one according to their greatness or smallnes of their Perspective. And first, you must frame this Base with all the members.
here, and with the right perspective there of, to be without any walking before, yet you must draw it lightly with a piece of Lead, as some other thing, as it is sketched unto you here with pictures, the in the ground or foot of the pillar you must draw the two Diagonal lines long through out, and thereby as I have before, you shall see the blin- nishing and the increasing of the particular parts of the corner of the said base; whereas the horizontal line of face at the ends of the base, appear much more broader and longer then those that are marked with the pictures; then at each corner of the Crest of the base you must draw an upright line almost as high as the first crest of the base (although I have done it, but upon the bottom part to comb the work within: then you must draw the uppermost corners of the first crest with pictures also, towards the Horizon, which borders the wall south against the two by-right lines; and there shall be the terminations to close on that by the second great Crest with a full black line: then draw another black line from the inward part of the Crest upward's to the Horizon, and there the Horizon shall be closed.

And as this Crest is sitting is closed and drawn on all sides with black lines, so you must draw with all the other lines of the base, so within from the uppermost corner of the first marked base you draw a helping line to the inward part of the corners of the greatest Crest, which may be of such breadth, as you will: that these seven square stones are two foot broad, which shall be the thickness of a Pillar; better are the two first pillars beneath in the breadth; there shall be eight square stones, and the height of the pillars made of what quantity you will, and they being raised toward the Horizon, then you must draw two general lines over both the Pillars, and then out of the middle of the first line you shall make two half Circles about upon the flat line below; and divide them in as many parts as you will; which parts shall be above to the Center of the half Circles, standing in the uppermost line: then out of the middle of the two general lines you shall draw the left half of the Circle, and all terminations of the half Arch being drawn to the Horizon, then the full Arch of Circle is made: the other two pillars upward's to the horizon, then the first Arch of Stage is made: the other two pillars upward's shall also stand equal and distant from the first Pillar, which will make a square cornered place on all sides containing 64 square stones: and you must bee with this gate as you did with the first, cresp (when they are all of one way) cresp (as these are) you need not trouble the Arches again; so for the Horizon other lines of the lines of the first Arch will show you the terminations of all the other Arches, and also how long the Gallery must be, and how many Arches it must contain. If there place no Arches here in the lines, because I would not condemn you to much at this time; but I will speak thereof hereafter particularly.

The two Domes on each side are both partly covered with the pillars, but the perpendicular lines of some Domes, belows that from the corner of the dome to the pillars on each side there are two Domes, as for the half thereof, and the other half you must suppose to bee behind the pillars. You knows above the Arches which bear by the Chamber above, you may well suppose, although I am not particularly thereof: I have not the time to let the base or the Capitals upon these pillars, because they would not batten them to much; but in another place I will also treat thereof.
The second Booke.  

The third Chapter.  

Folio.
Of Perspective

These two Domes or Arches are only made to know how to layne their Bases and Capitals to them, whereby in two several places I have spoken before, and noteth how they rise on the one side, and fall as decreas in sight on the other side; that a man may the better learn how to use them; so in truth, if a man could shoow it unto you in effect, you would use the better understand it; but to set it down in writing as Figures as I doe, that men hereafter might know and learn them, it is requisite to entreat of them more at large, and that you may the better discern one perceive the points of the thin lines from the other points or corners of the blache lines; therefore here I have placed the point of the distancies and the Position downward; and have placed the Pillars in other manner upon this ground without Quadrant lines: In this manner set the heighth of the two first Pillars upon the Bafe of such thickenesse as you will, and draw them inwards, towards the Horizon, then you must imagine the distancies, as I have already taught you; and these distancies are set on both sides, and on either point of the distancies you must draw aline both towards the right and left point as corner of each Pillar.

These Diagonal lines will not only shoow you the thickenesse of the first as formed Pillars when they choper, but also the thickenesse of the two other Pillars which stand inward, which are all marked with pretty, and as I have likewise said before, that which is here laid of the Bases of the Pillars, the same also must be understood inward of the Capitals; touching the thickenesse of the Bases or Arches inward, I have shown in the Figure before, how you must place the Center in the middle of the four cross point lines, to draw the half Circumference: The square or Quadrant above, is as great as that below on the ground; I need not tell you how you shall make it, for you see it plain enough in the Figure.
This Figure is like the former, only that the members of the Bases and Capitals are added thereunto; thereby to make it more perfect into you, and to shew you how a thing will stand when it is full made and finished, as though I had sketched it before; nevertheless, when a man is perfect herein, then he may by practice help himself well enough without all this labour, using discretion and bearing in memory that, which he hath imprinted in his mind: For in truth, by this means (I mean the ground) a man may by practice make many things; which if they be made without discretion, and by a workman, will always be present the workes, as these bases of Arches do, which hinder are denoted with Quadrants, as you may see them. There are, as you know, first two Centers to some the Arche underneath; now a wise workman must not always see the perfection of the edge of these Quadrants; but for example, say that the Arche underneath is divided into eight parts; whereas there shall be for the Quadrant, and two parts for the edge of border that runneth about it; so you must divide the space between the one Centre and the other, also in eight parts, but they must shorten or lessen a little, that is, the nearer part against the upper; so then the compass being let somewhat lower, and made narrower: then you must draw the uppermost border, and then the compass bring let a little below the nearest part Centre; then you must like last above the other edge of border: after, you must square to divide the Quadrants, leaving the space between both, once to breadth againe as the other, which must be drawen by towards the Horizon; and as much as you will make the Quadrant smaller, you must also draw out of the last Centre with the Compass. And in this manner a man may make divers figures and compartments (but as I have said) you must make them all with judgement, and therefore it is very convenient that a man should be well instructed therein; so that using only the principal terminations, you must make the rest by practice: But I am of opinion, that some rigorous Perspective men will take hold of these my books, (to whom I answer) that if they mean I have failed or done amiss, let them prove what difference there is between saying and doing.
The manner how to make a cross rose of a Gallery or House in Perspective works, is always very troublesome to show it into any man; and therefore also, it is much more troublesome to declare it in writing, for men hereafter to understand it. Nevertheless, because it is very necessary to be known, I will do the best I can to exhibit it.

First, you must draw the breadth and height of the greatest Arch or Wall that you desire to make, and then by the distances you must make a perfect shortening o"a Mural, and also a little Bow or Arch. The greatest Arch before Stabile partly divided into eight equal parts, and those parts must be drawn towards the Horizon, to the single Arch, which being done, then you must let those parts of the greatest Arch below upon the Table, and with the lines of the Perpendicular and Diagonal lines, you may make a shortening Circle within the Mural, as in the other places before you have taught. The terminations of this shall be 1, 2, 3, 4, 5, which shall be set upwards below the greatest Arch, as you first there also marked with 1, 2, 3, 4, 5. Without this round below I have drawn the Parallels with picking to the wall, and where the end, there you must set all those Perpendicular lines upright, which come out of the Parallel lines of this Circle.

Then you must draw the terminations of these, which are placed above, along the Perpendicular lines with lines to the Horizon, and where the lines of all lines cut through the Perpendicular lines, which are drawn by from below; there you must make half a shortening Circle; and that which is marked on this side with Tiphers, must also be understood to stand on the other, as you see it in the Figure.

These two half shortening Circles being made, then you must draw a right black line above each of each of the middle, which are marked 5, and where that cuts through the middlemost line, which goeth from the greatest Arch to the Horizon, there shall the terminations also the middle of the cross works, and last out of all the terminations of the two half Circles, you must draw cross lines on the side, and where every one of them following on Horizon, toucheth the Arch marked with 2, 3, 4, there the terminations shall stand to some of the half Circles in the cross, through the which a man with a steadfast hand from termination to termination shall make a shortening half square cross with pitches, as both on the right and left hand you may plainly see in the Figure. In this manner the works should go, although it is much somewhat out of the lines; but it is better first to print it well in your memory, before you take another tome where the Horizon standeth on the one side, that then you may the easier make that which is there on that side.
Having shewed in crose-booke on both sides, how you should place the Arches on the sides in mostening manner, and restore them by out of the ground, although that they be single; now will I shew you a hollow arches, and the manner how to shewen it: But before I proceed thereto (for it is deep combersome and difficult) first I will shew you the Pilaisters that should carry these Arches: which Pilaisters stand plainly in the figure that I shall not neede to take much patience toynple of them. In this Figure I have not made the first Arch, that I might not burden the light of the Arches on the sides, which Arches on the sides, I have also but marked how they shall stand, and are allowede to come out of the four square Quadrant, as you see by the ordre of the four square Quadrant, but the hindermost Arch which standeth not in the way, I have drawnn fully, and placed it also in his four square.

Above in the top or roof, I have made the round soime, whereof you may make a ketlet or Erubanall; and you may also make it thus, when it is somewhat fumke. Touching the four Pilaisters, they (as I have taught before) are found by the Diagonall lines comming from the point of the distances, and also that each Pilaister is there commed: standing like a thine corner bokke, and on each end (the Arch resteth whereof there shall be fource) two arches before, and two on the sides, so that the crosse will be right four square, wherein you may make crosse bokkes as other manner of looke bokkes. And if you will make other kindes of bokkes by the same, you must allowes follow this rule: I mean, where you can not well understand my writing, you must help your selfe with the figures, which figure also standeth open, so that with a little labour, a man may easily conceauce it altogether, although there were nothing spoken of it.
Of Perspective

Nor you see what way you must follow to place Arches on the sides in shortening manner: And first, you must shine the third former manner Superficies, wherein I have sufficiently shewed you the manner how to frame a round body; but in this Figure I will shew it more perfectly. Therefore a man must imagine that the round Body lying below in his square is made, and shall serve for the two Boxes on the sides. This Body then being made (as I have shewed before) and as you see it better now, you must still set it, where the Arches begin above the Horizon. And the same perpendicular lines which stand commiss faith from the middle of the square corner body, must be set like parallel lines on the right and left sides upwards from the two Arches, there (as it is aforesaid) to direct the Horizontal lines, as you may see it plainly in the Figure. But you must understand that the two crosses below in this Body are the two Centers to draw the Stones of the Arches both above and below, they also signify the Centers of the Boxes upon the Horizontal lines within the Arches.

You must also understand, that the blacke lines be some the Circumference without, and the pieces of thin lines between the same within, which is covered in the Arches; so that the Arches do shine through to be made of pieces, of the which pieces a man may learn to make other Compartments by inspection in the Arch. But when a man can make this Arch well, then he shall not need still to take all this labour, but by two principal lines helping himselfe with sticks, he may frame the Arch, and specially, because that the Arch which I have made before, cometh of both a great part of the Arches on both sides; where Arch I have not made here, that I might not darken at shadow the other shortening Arch. Neither need I write any thing of the Circumferences above in the top or below, (not the right corners within) nor that in the next Figure you shall see them, neither will I speak any thing of the Circumferences in the ground, so they are made (as I have taught you heretofore) of all others, and of the round body below (of which there hath been more said) a man may make many other things which are not here to be spoken of.
Of Perspective

To place Pillars with their Arches upon grounds or platforms, I think there is sufficient spoken before; and what I have there spoken of square Pillars, is also to be understood of round Columns, so that a man must take all round things, out of square square Things as well the Spira of the Spire, as the round of the Capital.

Be that can make all the Figures described perfectly, and particularly this solid body, shall help himself well, and not only to do the like things, but also to do many more. If I should in this small Treatise, only tell what I could set down, it would make a most great Volume; and perhaps I should want time to set so rich the rest of my Books, which I have already promised; for there are many things that belong to Building, which need not to be set down in Perspective Books.

Let us now begin to raise the Building here: first out of the ground, which before, and at the one side is done, as I promised before to show you.

The drawing not least way is, to make a ground with many Quadrants; and imagine that it is mete with the Feet, with the Feet, or other measure: But let us now take any Quadrant for two feet, and as before there are four Quadrants from one Pillar to the other; and the Pillar also contains a Quadrant, there shall also be four Quadrants upward in the length from one Pillar to the other, as you may see it altogether in the Figure.

The pillars then being set of such height as you before, then the Arches upon them must be made: and the manner how to make them, you may express in the Figure. And though you cannot see the Arches that are behind them, yet I have made them here that you may see their terminations; they are in some places quadrate with full black lines, and in some places with patches.

Above the Arches you must make the Architrave, Frieze and Cornice; the Perspective whereof, you must make as I have said and taught heretofore, that is, how they make their corners against the two Diagonal lines, and by the like rule you shall also make the uppermost Cornice, as you may see in the uppermost part, where the small Quadrant with the Diagonal lines stand. The dozors that stand under in the Gallery, are each of them two Quadrants broad, and four Quadrants high; below in the ground there are certain columns which you may call Pilasters, which simulate the uppermost of the windows above the Cornice; which windows if they were whole there, then they would be twice as high as they are broad. The other Pilasters upward between the thinning pillars, are also the breadth of the thinning pillars, which (as I said before) are all four Quadrants high, but they are partly covered with the Cornices. The part of the Arch which fronts at the ends, is separated from this Gallery, as the ground also is.

And here made no little no capitals, that the other things might not be confused: but you must understand that they must be placed in the book, as is sufficiently before showed. And by this rule you may build houses Buildings out of the ground, as in the Figure following shall be shown in divers scenes. The Centers of the Arches you fix them marked, standing all upon one Posterior line.
Of Perspective

Now I have shewed the manner how to make a Gallery in 12 Arches and pillars, &c, other things thereunto belonging; now by an easier way I will how to some some of Points that are to be built out of the ground. For

must make a ground of scate boards with Quadrants reaching long enough before, which Quadrants must each of them be reeled at two feet square.

And first, at the entry of the House there shall be a dooe of five foot breadth, so that it containeth two Quadrants and a half in the opening: and the height thereof shall be of ten feet, because it is five Quadrants high: for Pillars of Antipodium shall be a foot broad, because they contain a half of the opening Quadrant; the Frieze shall also contain as much: and the Centre shall contain so much taller, as the upper part thereof having one contained, and shall be made according to the rule aforesaid. Touching the part getting over the dooe, the Regulations of Factories, shall stand right above the Pillars; or Antipsy meridian of the dooe: and that little dooe upon the settling, shall stand right in the middle above the lowest dooe, and shall be three feet broad. In the other corner of this first House, there shall be another dooe, its breadth thereof shall be five feet, you may make it round or square above as you will. But why doe I spend my time to set down all these measures, which you may so plainly see in the Figure; censly it is necessary to know such as are studious herein, that what other former men rayly put out of the ground, consistent in their principal things, that is, in length, breadth and height. The length is of certaine Poles or Beames, containing a certaine number of feet. The breadth consisteth of Windows, Doors, Gates, Shoppes, and such like things. The height consisteth of Poles, Windows, Settings, Cornices, Columns, Rooves, and such like things. But there is yet another, that is of the height of the Waller, Pillars, Columns and Pillasters: The length is taken from the Horizontal Quadrant, and from those also you take the breadth. But the height is taken out of the breadth in the Quadrant, which breadth must be taken from the Quadrant of half a Quadrant, to which you must add the half of the breadth of the Quadrant, which is ten feet high: there you must take the measure from the Quadrant, which come to the Perpendicular corner or post of the dooe; so if there you take five Quadrants in breadth, it shall be height taken there Antipodium. And that which I have saie of these Beames, you must also understand of all other things: The height of the Wall is two feet, so you see it contains one Quadrant. The breadth of the corner Beem is of five feet, measured upon the ground: the like also the height or increasing of the first Beem contained. We conclude all things, as I have hitherto stated out of the ground on all sides, I have let no Corners, nor any other empty spaces in this Figure, that you may the easier understand it; but unto man a strife judgement and understanding knowing the terminations, can by his alone intention helps himselfe to make faire Buildings. And so that I may not spend too much time herein, I will make others to give you more light therein.
Of Perspective

The Stapes, degrees of going up, are very necessary in Buildings, and therefore I will give divers kinds thereof, and first I will begin with the easterly. According to common custom a Stape or Step is about halfe a fote high, and aboue a fote broad upon the Step; then let the square Frames of the ground be a fote square, there- where we will make a pair of Frames of the same height, and their fote broad: at the fote of the ground two will take the measure of the breadth, which both on the right and left sides shall be set in perpendicular lines on the Corners of the Stapes, which shall be divided into ten, as the lines A. B. show you. Then all the parts of A. B. shall be raised to the Horizon, and then you shall take nine Square steps upwards in length: and where as two lines are set by cutting through the Horizontall lines of A. B. there the corners D. C. of the uppermost Step shall be, containing a square square of those Square ones on each side. From the Horizontall points of the same upper Steps, you shall draw two Perpendicular lines to the lowest Step, against the which the Horizontall and the Perpendicular lines of the Square shall come together and thus by the Stapes.

The Steps are common on the one side, and the other is plane as well, and contains a step half in the height, which makes four steps and a halfe; it is also this half broad, as it is marked under it on the ground. By this rule you may make Steps or degrees as high as you will, and make some resting places in the way: always taking the measure from the fote of the ground, as well of the shortening, as of that that are upright.
The second Book.  

The third Chapter, Fol. 18.

The going up being pleasant and profitable, and yet are very easy to set in all places, I mean in the Laureat, and may serve for many things, especially in Buildings, where a man going up softly and with ease, gains the beholder a kind of pleasure to view them, principally in common places; for that there is a going up on either side, so that upon the one side men may go up, and on the other side they may go down; and although there are only but two going up, yet by this means his own intention may deserve others. How these Stairs are made, and with what reason, you may by the Figure perceive them, although I should say nothing thereof; for as it is said before, the Quadrants are of a good height; and the steps hath a foot high, and so the breadth of the step is one foot. The breadth of the Stairs is one foot, both the first and second. The rolling gate contained in a better this foot, and is foot high, which although it seemeth to be flat, and a small door opening in it; yet it may be made whole open and otherwise closed. The two seas above the two steps are one foot wide, although here it is but one foot, because of the narrowness of the Paper. The perpendicular lines on the sides, dignify leaning places, and they should turn well also to the steps, but lest they should render the works, I have left them out.
Of Perspective

Among other things which show well in Perspective work, I find that going up as steps are very familiar, and the other that the lower, the better they show; therefore I have made these two going by turning, which stand in profile, yet you see the ground and the steps. Thus first going up is five feet high and three feet broad, as you may see it marked in the ground with picks; the resting place between the first and second going up, is two feet squares long, which is necessary, because of the turning. At the end thereof you have a Portico, the space thereof is two feet wide. The Antepignonum is half a toare on either side, so that the place is there sufficient. The Perpendicular lines on the right side of the plainne, signifie certaine leaunings, which may be made of Iron, Tallow, or Stone; the like may be made along the Stairs both upward and downward, setting a Baluster upon every Stare; the height of this ends of leaunings, shall be six feet and an halfe; for so it is easie to lay a mans hand upon. Both these Stairs are made upwards out of the ground, although it may well be done by the Figure without declaring it: yet if I will say some thing thereof, to rule them that are that of memory. The resting gate at round does under the plainne the between the second and the third going up, is no deeper then the wall; Above the same door there standeth another going up, of fourc steps, which to make, I have sufficiently showed; otherwise a man should continue the ground at the resting does, to draw them up from it.
The Second Booke.

The third Chapter. Fol. 19.

Suing the several kinds of Stairs, I am assured that they may partly be understood without describing them in writing, and especially the middlemost which goth up on both sides; and so shall the uppermost also, here is it easiest up from the ground as well as the other, and is nine foot broad, as you may see and tell it on the ground upon the plain stones. The two Arches under the two steps  by are each a foot in thickness, whereby a going between is four foot within, and is also drawn out of the ground as the rest are. The other going by, which you see through the Arches, you may sufficiently perceive by them how they are made: and so it is with the two piece of Stairs on the left hand, for from the first steps at the setting steps, you may easily see how they are capped up and the ground, and above at the end of them there is a piece of plain ground to come to the other Stairs, which also is drawn up out of the pavement as the rest are, that is, each step half a foot high, and a foot broad. But it is hard to measure in small things; but it suffices that hereby you may see the manner thereof: and when you make them great you shall find that they will come well enough to use. Under the stairs last named, there standeth also a round house which is six foot wide: upon this ground, and on these Stairs a cunning Painter might place divers Figures in several forms, either standing or sitting upon the stairs; and lying upon the ground in shortening manner, and that in this wise: You may place the Figures where you will with ease, and then take the true figures where they stand, and that be their height, so that it is the height of a common ordinary man: this you must observe both before and behind, and in every place. If the Figure be upon a step, then take the measure of that step wherein it standeth, and make it twelve steps high, which shall be the same: And is the Figure lying, one the like, but it lieth in shortening manner upon the ground, then you must take the length by the shortening Distance.
Of Perspective

I have shewed many kinds of goings up, but there are other kinds, and he that is not well instructed in the former will hardly understand these two which I now here set downe. The first shall be making stepses in square, and he that can make these square square stepses, may well make the round stepses, for it is one thing, specially if he beeth the rule before set downe of the round bodies.

The Figure P. is the ground of this bounding steps, but it is much less then the uppermost to get ground. This square square ground in shortening you must make half a foot high, which shall be the first step. Then before at either end, you must make a perpendicular line up right, and in it make as many half sets as you desire to make the steps high; you must also place the like perpendicular lines between the middle, & the corners: then you must draw the terminations both on the right and the left sides upwards to the Horizon, which must cut through the perpendicular lines, which are drawn out of the terminations of the steps, and at the same height that the two corner perpendicular lines are: and of the same measures you must make the other two perpendicular lines between the corners and the middle. Then in the middlemost termination of the ground you must place on other perpendicular line, and denote also in half set, as the other perpendicular line on the side is: do out of this perpendicular line of the Centers against the nearest perpendicular line beneath on the left hand, you must frame the first step with two lines: The second step you shall also frame and that by out of the perpendicular line of the Centers in the corner following. Then from that point of corner you must draw a line to the Horizon, which against the second perpendicular line will make the termination of the third step, which shall also be that above, according to the aforesaid rule: from that point of corner of the step you must also make an horizontal line, which will touch the termination of the fourth step; which being closed, then you must raise that corner also to the Horizon, and that will show you the termination of the fifth step. And when that step is also closed with lines: then you must draw the point towards the Horizon, which line will shew you the terminations of the last step against the hindermost perpendicular line; and that being also closed by two lines, then out of the same corner you must draw a parallel line to the termination of the fourth step, and not towards the Horizon, because it is another line of the square square. Thus you must make round about from step to step, always following this rule by which you cannot fail.
The second booke. The third chapter. Fol. 20.
Of Perspective

That I may not forget to set down all kinds of Staples, and specially such as often times fall out to be made, therefore I have made these Staples, wherein a man may go up on all sides, whereof the ground standeth above on the right hand, but yet here small. These Staples must thus be made. First, you must make a square (or a sphere) of halfe a foot high, upon this you must set two Diagonall lines, and from the corner inwards there shall be a foot broad left on either side, and the terminations thereof opposite to the Horizon, and from the Diagonall lines you shall set the corners of the second step. Now I need not set down unto you how you shall find the lettering corner of the second step, the which is round about that by with Parallel and Perpendicular lines; then upon the second plane you must draw two Diagonall lines, which being (as I have before) full them on the third step; which also being closed up with lines, you shall also set the forth and fifth, with the like rules: This Pyramid is fantastically framed upon them to fill up the place. Also I need not set down to what uses these Staples may serve, for that the half of them is commonly found in divers pieces of buildings, as the gates of Pallaces, Churches, and other dwelling Houses, and the ascension by to Altars: By this way also you may make round Staples, and also Staples of the eight corners, as by their figures I have shewn.
The second Booke.

I have promised the ingenious Reader by this my labour to shew as much touching perspective as I can; that he might see how his conceits touching Houses or Buildings in perspective梧e, meaning to set downe some simple manner thereof, as if he should frame a single or double ground, thereupon to copye a body, and therefore means to end. But falling from one worke to another, I am entred into a Labowry, which peradventure is to farre above my reach; which I cannot but put by means of some men that have entreated me therunto; and therefore, as I thought at this time to make an end of my second Booke, I begin to handle a harder matter, which is only called an outward square; more especially, it is a certaine plate by the Horizon as by the distances, as you may see in the Figure following; which sheweth a right shewinge towre square, containing in it another square, the which also may bee formed by the distances without Horizon; some men place the sides of the square upon the wale, one to where before; and as you see two like sides of the square square over the corner, so are the distances alike made D: and as much more as you will have this square square to happen, so much you must draw the distances from the Horizon: and as much as you will that the edges of the square square shall be broad, so many breth of must you bray upon the wale, between A. C. twice manner. All the terminations of this square standing above the corner gos all to the distances, and none to the Horizon, but only the square square that is set therein.

Now I have shewed how you shou'd shew a Superficies, one point or outward square: here I will shew how to turne a body or place out the body thereof, with the same Horizon and distances also, which body within is hollow, and you may heave it up as high as you: but I have purposely lett it somewhat low, that you might see the ground thereof. And by this Figure you may see how many things this manner, and also how you may increse or dimmish it, according to your judgment. This shall suffice for these square models of hollow things: but I will shew you how you shall make them to Crefts or Tumices.
Of Perspective

This Figure is also formed by the same two Horizon, and the like distances as the other before, only that they have a little nearer: how to erect this body both alone and beneath, you must imagine the greatness of the crest, and draw the same great, and in both above and beneath the body, by the sides of the body above their true Perspective, and from those points you must let in perpendicular lines fall to the points or corners below, whereby you shall have the Perspectives of the base and top thereof, which must be drawing towards the distances, and not towards the horizon. Now you see how the Cornices stand without the square square body: but thus is only for Cornices that are made without members, not to confound you with the shadowing of them, for I will speak of them hereafter particularly.

I spoke before of Cornices without members, which might serve this hollow Diancon, and how you shall make the terminations thereof. Now in this Figure I shew you the said Cornices with their members, which you may also make in other manner as it pleased the工作men, that is, to make them bigger or lesser, as I have spoken of other Cornices, always being good direction and judgement to choose and make such members therein, as may seem well in mens light. There are some Cornices which rest to face once, that men can not see the members thereof under them; therefore in that case the members are to be made, that they may be strongly and pleasant in mens light.
The second Booke.

The third Chapter, Fol. 22.

The four Figures above said have their distances equally broad from the Horizon, that is, as much on the one side as the other; but the Figure following is of another manner: so that the Horizon lines seem both for distances. To understand it, begin this: First, the base A.B. is made and is placed in four equal parts, so C.D. The lines C.D are drawn on the right hand towards the Horizon, and the lines A.C. are drawn towards the Horizon on the left side, which forms a perfect flattening square square; which square figure you see more on the one hand, than on the other. The four points of corners of these square square things, are F.G.H.C. If you divide these four square things in two parts, then you must divide the base D.E. in two parts, and the terminations thereof being drawn to the right line, there you shall have the half of your four square marked with two Stars. But if you will lengthen it another half square square, then draw a termination E to the right Horizon, the lines at K. the other half square square, so that these Superficies shall be of two perfect square corners: And this will serve the Ingenious Workman for many things, which I will not here set down: for brevity sake.

This body hereafter following is casted up out of the former Figure before set downe, and is made with the same Horizon, which body containeth two cubits and a half in length, a one in one part in height, so the line C.D. is set in the particular manner upon the next mentioned figure, whereas the other Superficies are set: then this body is of two Superficies, I mean two square squares in length, and one square square in high. And this body (as I said before) shall serve for many things: But if you will have many cubits in the length, then lengthen the base in so many parts more, and you shall always have the fourth hereof. And if you will make a window or creat about this body, then you must follow the rule above.
Of Perspective

As T shall you make divers things upon one ground, then it is convenient that first you make a pavement, as you
see it here set downe, and thereupon frame what you think of good upon the quadrants, and the line the quadrants
are, and the more in number, you may the easier frame things upon them. The cradle made upon this ground
is only to show you the way and entry thereunto: but for such a forme, you may make a figure of a Christian
Church as they are now built. The other forme by it, representeth a piece of a foundation of a House, but all these things
you may make in a greater forme, and set them so high as you will, sometime placing the Horizontal lines in such manner
that you may see more of the out sides, but yet thepositions must stand all of one height.

Of this Superficiall Figure described, I have copied these bodies, to shew how the Positions of them did
stand in the worke as well above as below, as you shall finde by experience, and in truth those trusses which you
lay over the points of corners containeth Bookes alone by themselves: but (as I said before) my meaning was
to shew but this one figure of them, yet I will shew ten of them, intending to leave the Reader some
words there I am well assured: For that he hath more eyes, and more patience than my falt, he shall finde many
things which I write not of, nor yet set downe.
Upon this pavement (as I said) you may frame or frame what you will, but in this pavement being living, you set a column living, being right square, which is three foots in thickness, and four square in length. This right square column may be made out of a column of four square, as before in another place is shewn; which square square you may be known hereon both guides, and the terminations of the right square with black lines. But because that this right square column is too much broad on the sides, the reader to make rect of the square figure: I have therefore made an other piece by it, which, because it doth appear to this fashion, is done more before, then the other, although not so long, for it is but half so long as the other, as you may see it tell it in the ground as cert thereof. And if it were so that this right square figure reached nearer to the battalion, it would then be better seen, yet it would not be wholly seen before, because it hardly without the square square and corner.

These columns are the same which are before set downe, but the other well hollow, and those mastic, whereby an expert workman may frame out many things exercised this way, although there are other means to be used, as Albert Durer hath shewn, to make through holes with a thred. There is also another way, which is known out of flat squares which is the fairest way, but very troublesome and hard to describe in writing, wherefore I have chosen this as the easiest way to be shewn: And if I had not undertakent to shew other things of more importance, I would have shewn divers bodies and houses after this manner. But for that I mean to enframe of scenes, and the preparing of places for those Comedies and Tragedies, which is now done in this age, and specially in Italy, therefore I will make an end of these four cornered things, leaving it to another (as I sayd before) to set forth more thereof.
Of Perspective

Because I mean hereafter to entreat of Theaters, and Scenically belonging unto them, as the best learn'd in these days. For in the which Scenery it will be very hard for a man to draw both, where a man should place the Horizon herein, because it is an other thing then the rule before declared: Therefore I thought it good first to make this positi, but the ground by the positi must both together be the better understanding, yet it were convenient first to note the ground, and if it befallth out that a man cannot attain to all within the ground, then he must proceed to the positi to be the better instructed therein. First therefore, I will begin with the Scenofold before, which as the eyes of that land elevated from the earthly, and have flat, made by the water composite, marked with C. And the Scenofold from B. to A. shall stand henwed under the same, A, as in part of the length thereof, and that standing up behind the first marked with an M. above it, is the wall of the Hall or other place, against which, where this scene shall be made. It which landeth a little distant from the hall perpendicularly, is marked P. that be the backe or bounding behind of the Scenery, that a man may go between it and the other wall. The termination O. is the Horizon. The lines with pitchers coming cross upon the water composite from L. to O., where it toucheth the backe P. there you hall place the Horizon only there for the last backe. And coming towards to L. this line shall always be the Horizon, for all the Dialogue of the house which shall standalwards as outwards: But the Scenography of shortening sides of the houses, they must have their Horizon standing further to O. And it is reason, which cutoff same two sides (as the must be built that men may be out of them on both sides) should happen two Horizon lines, this is reaching the positi of the scene. But the place which is called Horizon is that which is marked with P. and the part marked with C. is called Metesfera, which is raised half a foot from the earth, where you shall mark, are the places for Parliament, and Knight's table. And the first seat of Rep. marked C. are to the right and left, and B. to it, and做工 a higher, there shall the meaner foot of Godures sit. The other place, marked H. is a step, and so is the place marked E. Betswane and E. must sit Gentlemen of quality. And from L. towards meaner Gentlemen shall sit. But the great space, marked K. shall be common Officers and other people: which place may be greater or less, according to the length of the hall, as any other place. And the Theatre, with the Scene of Scenofold, which I made in Venice, was added in this last: and from the one corner of the Theatre to the other, was eight and twenty foote; for it was made in a place where I had come enough, but the Scene of Scenofold was not so broad, because it was placed in a lodge. The frame of the lattice was all made in one, as you may see in this figure. And because the Theatre stood in an open place which had no wall, wherein it might be made so, therefore in the circumference I have made it sticking out, so the more strong and fallenere thereof.
A Treatise of Scenes; or, places to play in.

Among all the things that may be made by men's hands, there to yield admiration, pleasure to sight, and to content the fancy of men; I think it is placing of a Scene, as it is called to your sight, where a man in a small place may be built by Carpenters or Scholars, skillful in perspective books, great Places, large Temples, and huge Houses, both near and far off; huge Places filled with Houses, long Floors cleft with other Ways; triumphant Bridges, high Pillars to Columnns, Piramides, Obelisques, oblong, and a thousand large things and buildings, adorned with incomparable lights, great, middle, and small, as you may fix it in the Figure, which are so cunningly set out, that they seem and represent a number of the brightest places, as Diamonds, Rubies, Sapphires, Smaragds, Pearls, and such like. There you may fix the bright shining Some ascending only with their hands, and already rilled up, before the spectators are ware of, so one fits it ascendant. In some other scenes you may set the rising of the Sun, and his coming about the world: and at the ending of the Comedies, you may set the bug bagonie most artificially, where as many beholders have been visible. And when occasion serveth, you shall set scenes of Sceena descending from Heaven, you also set some Courts and State that in the space there you set distinct figures come upon the Stage, richly adorned with diverse orange frames and manners of apparel both to dance Sports, and play andie. Sometimes you set strange beasts, wherein are men and children, leaping, running, and Tumbling, as these kinds of beasts do, but not without admiration of the beholders: which things, as occasion serveth, are so pleasant to every eye, that a man could not so faire made with man's hands. But to that we are entered into another kind of perspective books, therefore I shall speak more at large thereon. This perspective book was of 15 silver, although it be contrary to whichever which are termed before, because these alone are imagined to be upon a flat wall: and this other rule because it is material and immersed at equal distances, so that it is rendered another rule therein, according to my method. First, a Scene shall be made by water compacts, which shall be made 12 foot broad, and 60 foot long, according to the place wherein it should, which I found to be pleasant and so to thereto: this first Scene, because it was right, therefore the pavement there of must not obey the Roses, but the Dungeons, wherein on every side were some round, from whence at the beginning of the rising of Scene B all the Dungeons went to the outermost and Scene C which with them and others to shorten very well. And for those men have placed the Posidoni of this perspective against the wall right above the Scene, whereby it formed the outlines of our space on all sides; therefore I determined to place the Posidoni before the doors, which pleased me to well, that I also the same kind of order in all these kind of works: and I counsel those that take pleasure in such Arts, to be and else the same way for the best, as I will shew in this Figure following, and have also declared in the part of the Theater and Scene.

And because the preparation for Comedies are done in this sort, that is, withal, Tragic and Satyrical, I will first entreat of the Comedies, whereof the Scenes must be made as it were for common or ordinary people, which for the most part must be made under roofs in a Hall, which at the ends thereof hath a chamber for the pleasure of sale of 6 per sonages, and therefore that the ground of the Scene must be square, and as (as I said and showed before) in the Public. Therefore C. is the first part being the flat scena, and suppose that every Dungeon consists of two or three sides on either side, so that upon the hanging Scene before on the East be also two foot broad, which is marked B. And (as I said before) my meaning is not to place the Posidoni here against of the backe behind in the Scene, but as far as is from the beginning of the pavement B. to the wall, so faire I would also that mens shall paile behind through the wall, and so shall all the houses and other things show forward in the shortening: and when by convenient balances you have determined all the Dungeons towards the Posidoni, a shortened then, you may shorten the scene right with the square figure, which house are the great lines marked upon the ground, with which they stand upright, so those that short, all such houses I always make of space, at either a length, covered with linen cloth, making wages and unbandes, both before and in the shortening, as satisfies was set out. I have also made some things of half plants of wood, which were agreeable to the Player to set forth things at life. All the spaces be the backe to the wall marked A. Shall be for the personages, to which the end of the middle backe in the middle land shall at the least two foot from the wall, that the personages may goe from the one side to the other, and not be seen. Then you must make a termination at the beginning of the pavement B., which shall be the peep L, and from thence to the Posidoni there is a line drawn, as it is marked in the public with pitchs, which shall be of little height, and so that the presentable backes of the Scene as Scene B, there the Posidoni of that backe shall stand: and that Posidoni shall stand in at that backe. But if you stretch a cord of any other thing to the termination L., then you may raise a thread to it, and stand backward to forward, to the front of the public Scene, all the Dioptrics of the houses before. But the Posidoni which goeth through the wall, shall scene for all the shortening lines of the houses: and so that mens shall break the wall, they would use all this Posidoni in great, which may not be done, therefore I have made a small round of wood and paper roll of the same bigues, and by the presentable roll it stand in great, from piece to piece. But this way shall fall after for some men to understand, and the least, it will be necessary to house by houses and experiments and by have a man shall fall into the way, and so that a man cannot find any holes into great scenes, wherein can be placed a Theater without perfucion and unbandes; therefore to follow in his quities, according to my pattern and oblique, I have made all such parts of these Figures, as may stand in a Hall. Therefore the part marked D. shall be the past scene, and the circular place marked E. shall be thecripcion round about this Dioptrica shall be the places for the noblest personages to sit, marked F. The first steps marked G. is for the noblest woman to sit upon. The place H. is a way, so is the part marked I. In the middle between these designes are steps the other to go by. The places marked K. must be made great backward as the Hall will afford, which is made somewhat sloping, that the people may see out of the other head.
Of Perspective
The second Booke.

The third Chapter.

Touching the disposition of Theaters and other Scenes, concerning the ground thereof, I have spoken sufficiently, now I will speak of the scenes in perspective in books: and so that Scenes are made of this sort, that is, Comical, to play Comedies on, Tragical, for Tragedies, and Satirical for Satires. This shall be Comical, whereas the houses must be slight for Citizens, but especially there must not want a broad wall or bawdy house, and a great store, and a Church; such things are of necessity to be therein. How to raise their houses from the ground is sufficiently expressed, and how you shall place the Horizon: neatly thereof, that you may be better instructed (touching the former of these houses) I have here set down a Figure for satisfaction of those that take pleasure therein; but because this Figure is too small, therein I could not observe all the measures, but refer them to invention, that thereby you may choose to make houses which serve well, as an open Gallery, or lodge through which you may sit in other houses. The hangings are to hang out, should be well in the upper parts, and some couples cut out at the ends, accompanied with some others that are painted, that well in books: so do the houses which have great bearing out, like lodgings or chambers for men, and especially about all things, you must set the smallest houses before, that you may to other houses over or above them, as you fit it here above the bawdy house: so if you place the greatest before, and the rest behind still further, then in the place of the scene would not be so well filled, and all, as those things upon the one side be made all upon one side: Nevertheless, so that you place great part of the lights in the middle, hanging over the scene as Breastiff, therefore it would stand better if the whole or the middle were taken away, and all the cornets and Cuvadans which you set in the buildings, they are artificial lights cutting through of divers colors, which to make, I will shew the manner in the last of this Book. The windows must stand before, were good to be made of Glass or Paper, with light behind them. But if I should here write all that I know to scene for this work, it would be too long to rehearse; therefore I referre, that to the will and discretion of those that exercise and practice themselves therein.
Of Perspective

Houses for Tragedies, must be made for great personages, for that actions of late, strange adventures, and cruel murders,
(as you read in ancient and modern Tragedies) happen always in the houses of great Lords, Dukes, Princes, and Kings.
Therefore in such cases you must make none but stately houses, as you see it here in this Figure, whereof (for that it is so final)
I could make no princely Pallaces: but it is sufficient for the workman to see the manner thereof, whereby he may work himself
else so time and place require: and (as I sayd in the Comical) hee must always study to please the eyes of the beholders, and
forget not himselfe so much as to set a small building in stead of a great, for the reasons before said.
And so that I have made all my Scenes of late, covered with stucco, yet sometime it is necessary to make some things rising or holing out; which are to bee made
of wood, like the houses on the left side, whereof the Pallaces, although they shewen, stand all upon one Base, with some stairs, all covered over with cloth, the Cornices bearing out, which you must observe to the middle part: But logue place to the Galleries, you must set the other: that is one or other in the Backward, and make a comice about it, as you see: and that which I speak of these Buildings, you must understand of all the cell, but in the Buildings which stand far backward the Painting works, must sup-
ply the place by shadowes without any bearing out:touching the artificiall lights, I have spoken there of in the Comical books.
All that you make about the doores fixt in it, as Chimeres, Tovers, Pyramids, Obeliskes, and other such like things as Images, you must make them all of thin hobs, cut out round, and well coloured: But if you make any flat Buildings, they must stand some what faire inward, that you may not see them on the sides. In these Scenes, although some have painted personages therein like
supporters, as in a Gallery, or Doore, as a Dog, Cat, or any other beasts: I am not of that opinion, for that standeth so long without moving or moving; but if you make such a thing to lie deping, that I hold withall. You may also make Images, Histories, or Fables of Satyre, or other matter against a wall; but to represent the life, they ought to stirc. In the latter end of this Book I
will shew you how to make them.
The second Booke.  The third Chapter, Fol. 28.

The different Scenes are to represent Saxies, wherein you must place all those things that be rude and rustic, as in ancient Saxies they were made plain without any respect, whereby men might discern, that such things were referre to rusticall people, which let all things out truly and plainly: For which cause Vercius speaking of Scenes saith, they should be made only Trees, Thrones, Herbs, Hills and Flowers, and with some country houses, as you is them here let behave. And for that in our days these things were made in Winter, when there were but few great Trees, Herbs and Flowers to be found, then you must make these things of Silke, which will be more commendable then the natural things above mentioned: and as in other Scenes for Comedies or Tragedies, the houses or other artificial things are painted, so you must make Trees, Herbs, and other things in these, the more such things cost, the more they are esteemed, for they are things which lately and great persons see, which are ene-

mies to rigardimess. This have I some in some Scenes made by Hieronimo Comen, for the pleasure and delight of his lord and pa-

tron Francisco Maria, Duke of Veblin: wherein I saw so great liberalite used by the Prince, and so good a concord in the workman, and so good art and proportion in things therein represented, as ever I saw in all my life before. Oh good Lord, what magnificence was there to be seen, so the great number of Trees and Flowers, with many Herbs and Flowers, all made of fine Silke of divers colors. The water courses being adorned with Frogs, Snakes, Toadettes, Worms, Snakes, and other beasts: Vases of Carvings, mother of Pearl, and other things in so and thus skilfully between the Lines, with so many sweete and faire things, that if I should declare them all, I should not have time enough. I speak not of Satires, Simples, Paradoxes, divers manners, and other strange beastes, made to entertaine, that they seemed in them as if they went and builded, according to their manner. And if I were not desirous to write, I would speake of the costly apparel of some Shepherds made of cloth of gold, and of Silke, cunningly minglest with emmery: I would also speake of some Fishermen, which were no lesse richly appareled then the others, having Hes and Angling rods, all gilt; I would speake of some Countrey maps and Spheres carefully appareled without price, but I have all these things to the direction and consideration of the judicious workman, which shall make all such things as their patrons force them, which they must wash after their works done, and never take care what it shall cost.
Of Perspective

Of Artificial light of the Scenes.

Promised in the Treatise of scenes to set someke the manner how to make those lights shining through, of divers colours, as I must speak of a sort of colour which is like to a Zephir, and yet somewhat farger. Take a piece of Balamaonite, and put it into a Bore's Water, or such like thing, and put water into it: then bure, and craft the Balamaonite softly therein, till it be all melted, always putting more water unto it, as you should have it light as soad water; which done, if you will have it lamp and clear, then strange it through a fine cloth into another breast, and then it will be a clear Celestial blue, whereas you may make divers kinds of blue with water. Will you make an Emerald colour, then put some Ethen so you will have it pale or high colour, so here it is not necessary to preserve you any weight of matter, for that experience will teach you how to do it. If you will take a plate where you can get no wine, that take with bitter to power, squirt it into a Boret of water with Alum, let it beke, and skim it well, then strange it, and let it with water and Alumter. If you will moreover a Silters, you must make it of red and white Wine minguted together; but while Wine alone will show like a Rose or a Ceratite: The Court of common water being strung, will be like a Diamond, and to be this well, you must upon a glass ground frame certain points or tablets, and fill them with water. The manner to set these shining colset in the same manner, that these lights shall be placed, whether it be round or square, squared or angles, like a Circle, and within the same bound there shall be another smaller bound inside the former; no the bottles and other manner of glasses with these waters to have it, must be placed against the holes, as it shall necessarily fall out, but they must be left tall, lest they fall with leaping and running of the Mountains. And behind the glasses you must set great Lamps, that the light may also be reflected: and if the bottles or other vessels of glass on the face where the light ends were flat, or rather hollow, it would show the clearer, and the colset must excellently fare; the like must be done with the holes on the fronting side: But if you neither make a lights more than the rest, then put a torch behind, and behind the torch a bright Salon, the brightness whereof will show like the beams of the Sunne. You may also make glasses of all colset and foames, some scarce figure, some with crosses, or any other figure with their light behind them. Now all the light shining colset for the colset, shall not be so which must light the Scene, for you must have a great number of lights before the Scene. You may also place certain candlesticks above the Scene with great candles therein, and about the candlesticks you may place some bevels with water, wherein you may put a piece of Camphir, which burning, will show a very good light, and smell well. Sometimes it is my chance that you must make some thing as other which should come to burn, which you must not throughs with excellent good Augistine, and setting it on fire with a candle it will burn all over 3: and although I could make none of these fires, yet this shall suffice for this time: I will speak of some things that are pleasant to the beholders. The while that the Scene is simple of picturesqueness, then the workman must have certain Figures of foars ready of such greatness as 3: a place where they must stand, will afford them to be, which must be made of poul boards, set out round and painted, signifying such things as you will, which figures must heare against a wall or black of wood, cross the Scene where any gate, door, or way is made, and there some one or other behind the one must make the figures passe along, sometimes in groupes of straight lines with strings, and some like fingers, and some like hands; and behind the scene some must play, upon certain instruments and sing also, sometimes you must make a number of those men and women going about with Trumpets, Drums and Drums, at which time you must play with Trumpets, Trumpets and Drums, or, being softly played, which will keep the peoples eyes occupied, and content them well. At it be required to make a Plante of any other thing to passe along in the Arc, it must be framed and cut out of poul boards, and then in the handers and backs part of the houses of the Scene, there must be a piece of piece paper alone in the walls of the houses, and made set with certain rings behind to the poul boards painted with a Triangle or any other thing that shall make afose fly by a man with a black cloth from one end to the other, but it must be false from men's light, that neither of the thydows may bee seen. Some time you shall have occasion to their Thunder and lightning as the play requires; then you must make Thunder in the manner commonly all Scenes are made at the end of a great Wall, where as usually there is a chamber above it, whereas you must make a great Bell of a Cannon or some other great Decramer, and then counterfeited Thunder. Lightning must be made in this manner, there must be a man placed behind the Scene or Bradley in a high place with a bow in his hand, the cross must be filled with powder of bourns of Sulphur, and casting his hand with the bow towards the powder owing in the candle, will fly as it were lightning. But touching the beams of the lightning, you must shew a piece of Caw over the Scene, which must hang (downwards, whereon you must put a cord crossed over with pure gold or shining Latin which you well: and while the Dutch is reading, you must shew some piece of Display and with the fame giving fire to the quins, it will move the effect which is desired. It would be exceeding if I should speake of all things which are to be did in these affairs, therefore I will cease speaking of Perspective things.

FINIS.
The third Booke,

Intreating of all kind of excellent Antiquities, of buildings of Houses, Temples, Amphitheaters, Palaces, Therms, Obelisks, Bridges, Arches triumphant, &c. set downe in Figures, with their grounds and measures; as also the places where they stand, and who made them.

ROMA QVANTAVIT IPSA RVINA DOCET
Although divers Authors write many strange things touching Architecture, as the Egyptians, the people of Asia and Greece, with divers other nations, and have left them for our example; to that reading them, we may sufficiently satisfy our ears, and fill them with the greatnesse thereof, that is, touching the length, breadth and depth, that certaine places have contained, yet we can not satisfy our eyes, nor the desire we have to see such incredible works, unless it had beene our hope to have the contemplation thereof, for that the reliques of such works are almost, or for the most part utterly defaced; or else we might have seen them drawn in proportion unto our eyes, as in this Booke we may not only read, what the Romans did, but also the same Authors have set downe unto us in Figure (as you may see them here) piece by piece, not only how many rods, feet & palmoes, but also the minutes thereof, and what compass they contained, all perfectly described. And although it was no part of my intent, to translate this Booke of Antiquities of Rome into our mother tongue, regarding the barrennesse of our language, or peradventure such as studie or favour the same, are all too few to defray my charges therein: yet I have not refrained to doe it, being therunto compelled by the great works of the fortification of the City of Antwerp, and other great places, and for this cause specially, that every man that wondereth at the greatnesse thereof, which was made with so many great cost & charges, may hereby see and consider, you how much greater, & needes charges (to be compared unto this) the Romans yt declaring of other nation) have in some past bellowed, in making of Obelisks, Pyramids, Termes, Theaters, Amphitheaters, triumphant Arches, and many more such like things, which served only for pleasure & triumph: whereby it is to be presumed, that they would have made the fortifications of such Cities or Townes, made for the safety of the Land, far better then they now are. Now it is to be noted, that all, whatsoever the Romans have made, doth not wholly agree with Vitruvius rules, for that many which have counterfieted these, and such like pieces of works, have thereby beene abased and disgraced; for some would hardly believe, that in these days (as well as at this time) all manner of workmen were so better then another; which many, moreover and we shall fully do many things, which good Antiquities would willingly not suffer, because they shall find good instructions in this Booke (and they may learn, if they will read it) how to doe some good from bad, whereunto the former printed fourth Booke is specially made for in it the whole quantity of the measure is contained, as in the Epitome of the said Booke it is promised. So in this third Booke, you shall not only find, first the Architektonick, and then after the Orthographics, with part of the Stiographicke of the most famous Antiquities of Rome, Italy, and some of other places, but also of the most excellent buildings in our days, specially those that are made by Bramant, So that the Reader being well instructed in the former fourth Booke, where all the Orders are well set forth and declared, he may of himself judge what it will or will not make, that at one time a man may, without any further labour, make an good and incorrigible piece of works.
The third Booke of Antiquitie.

The fourth Chapter.

Mong all the ancient building to bee seene in Rome, I am of opinion, that the Pantheon (for one piece of worke alone) is the fayreft, wholeft, and beft to be understood; and is so much the more wonderfull then the reft, because it hath so many members, which are all fo correpondent one to the other, that whoeoeuer beholdeth it, taketh great pleasure therein, which proceedeth from this, that the excellent workeman, which invented it, chofe the perfeft forme, that is, the round forme, whereby it is vually called, Our Lady of the Round: for within, it is as high as it is broad. And it may be, that the fayd workeman, confidering, that all things proceeding orderly, haue a principall and onely head, whereon the other parts depend, was of opinion, that this piece of worke should have onely but one light, and that, in the higheft part thereof, that it might spread abroad in all places alike, as in effect you fee it doth: for besides other things which haue their perfect light, there are five Chapells, which (for that they stand within the thickneffe of the wall) should be darke, yet they have their due light, by the meanes of fome drawing windowes, aboue in the top of the fayd Chapells, which give them second light, taken from the vppermoft hole, fo that there is not any small thing in them, but it receiues a part of the light, (and this is not made without great judgement:) for this Temple, in old time, being dedicated to all the gods, by which meanes there flowed many Images in it, (which the diuers Tabernacles, Seats, and fmall windowes shew) it was necessary that every one had his due light. Wherefore fuch as take pleasaure to make Images, and other inblesed or graven worke, must confider, that fuch a Cabinet should haue this light from aboue, that every one, standing in his place, needes not looke for light to fee, but that they may be fene altogether at one time. But to come to my first fpache: For that the Pantheon femeeth vnto me to bee the perfeft piece of worke that ever I fea, therefore I thought it good to fet it first in the beginning of this Booke, and for a principall head of all other pieces of worke. The founder of this Temple (as Pliny writeth in more then one place) was Marcus Agrippa, to accomplifh Angius Caesar left will, who being intercepted by death, could not finifh it: and fo it was built about fourteene yeeres after the birth of our Lord, which is about 5203, yeeres from the beginning of the world.

In this Temple (as Pliny writeth) the Capitals were of Copper; and hee writeth alfo, that Diogenes, the Image-maker of Athens, made the excellent Caractes in the Pillars, and that the Images placed aboue the Frontispicium were much commended, although by the highnesse of the place they could not be fo well discerned. This Temple was commended with lightening, and burnt, about the 12. yeere of the regne of the Emperor Trajan, which was about 113. yeeres after the birth of Christ, and in the 5311. yeere of the creation of the world: and Lucius Septimus Severus, and Marcus Aurelius Antonius, repayed it agayne, with all the Ornaments thereto belonging, as it appeareth in the Architave of the fayd frame: which Ornements, you must presume, were all new made, otherwise the Caractes of Diogenes would full have bene fene there. But in truth, the workman that made it, was very judicious and content, for that he proportioned the members thereof very judiciously to the body, and would not suppress the worke with many cuttings: but as I will shew, when time serveth, how to place and divide them excellent well. Also, in all the worke, hee hath obturated the worke of Corinth, and would mix no other with it: and withall, the measures of all the members are as well obturated as euer I faw or measured in any other piece of worke, whereby we may call this Temple an example of workmanship. But leaueing this matter (for that it giues the worke man little, no inclination to the purpofe) I will proceede to the particular meafeures: and that I may goe forward orderly in this Antiquitie, the firft Figure fhall be the Ichnography. The second, the Orthography. The third, the Scitography.
Of Antiquitie

This Figure following is the Ichnography, that is, the ground of the Temple aforefayd, which is measured by the ancient, or old Romifh Palmes placed along by the side hereof. And first, speaking of the Portall, whereof the Columns are 6. Palmes & 29. minutes thick. The Intercolumns (which are the spaces from one Column to another) are 8. Palmes and 9. minutes: the breadth of the Portall is 40. Palmes; the breadth of the flat Pillars of the Portall, is like the Diameter of the Columns: the breadth of the Seates between the Pillars, is 10. Palmes: and the Pilasters on the sides are 2. Palmes: the widenesse of the Gates is 26. Palmes and a halfe: the widenesse of the whole Temple (that is, of the Floore within, from one wall to another) is 194. Palmes: and it is so much is the height from the Flooro to the vndermoft stone of the window above. The fayd round hole is 36. Palmes and a halfe broad: each of the fize Chappels that are made within the widenesse of the wall, are 26. Palmes, and 30. minutes: and goe halfe as depe into the wall as the widenesse of the foure square Pillars on each side. But the principal Chappell is thirtie Palmes broad, and also is an halfe Circle, besides the Pillars aforefayd. The widenesse of the Columns of all the Chappells, is 5. Palmes, 3 minutes lefle: the foure square corner Pillars also of the fayd Chappells, containing as much. The Columns of the Tabernacle betweene the Chappells are two Palmes thicke: the widenesse of the wall that goeth round about the whole body of the Temple, is 31. Palmes. And although that the Chappells make the walls hollow, yet betweene them there are hollow places made within the walls, which some fay, were left for places to receive wind, because of earthquakes. But I am of opinion, that they were left fo unfiled, to spare fluffe, because they are made circle-wise, and are strong enough. The going vp, which you fee here on the left side, was also on the right side, to go vp the Portall: men also went from thence round about the Temple, oute the Chappells, through a secreete way, which is yet there: through the which also, they went without on the steps, to clime vp into the higheft parts of the buildings, with many goings vp which are round about it. It is thought, that this foundation was all one made of lumpes, and without many places hollow, so that some neighbours marking it, and seeking to build, haue found such a foundation when they dug.

This is the old Romifh Palme, which is deuided into twelve fingers, and each finger is deuided into foure parts, which are called Minutes, by the which measure this preuent Figure, with all the parts following, was measured.

Anne Dom. 1750

On the sixth of Novem. the Antiqua-

of the antient Pantheon at Rome suddenly fell in, to the great demolition of that magni-

cftrate building, a precious remain of the

Roman Architecture. It has been

 transformed Church, dedicated to the Virgin-

Mary, and all the Martyrs called the Florid

Galilea Saints.
The third Booke.

The fourth Chapter, Fol. 2

The ground of the Pantheon called Rotonde.
Of Antiquitie
The forme of the Pantheon without.

This Figure hereunder, sheweth the whole forme of the Pantheon right before, and although at this time men go up and downe into it by certaine steps; yet as it was made at the first it was seven steps above the ground. It is no wonder that such a piece of work is yet whole and standing still, for that the foundation was not sparingly made, for it is thought that it was once as broad againe under as it is above as it had been found by the neighbour workmen: but let us proceed to the particular measure thereof from the earth upwards. I say before that the Diameter of the Coloumns of the Portal is five Palmes and twenty minutes but the height is more and a little Palmes and nine and twenty minutes, without the Bases and Capitals: the Bases are three Palmes and nineteen minutes high, and the Capitals seven Palmes and four and thirty minutes high; the height of the Architrave is five Palmes, the Frase is five Palmes and thirty minutes high, the Capitez is four Palmes and nine minutes high above from the top of the Column to the point of the ceiling, are four and thirty Palmes, and nine and thirty minutes. The Limpainum, that is, the flat part of the Ceiling, is thought to have been adorn'd with finer images, although it is not let alone in painting; but considering the great power of such Emperors, I am persuaded that it was so, for if the Gothers, Vandals, or other nations (which spoiled Rome more then once) had beene destroy'd by constant of Copper, they might have taken it from the Architraves and other Decorations in Portals in great abundance: but let it be as it was, there are Figures and tokens there, which shew that there were Figures and tokens of Prettell standing thereon.
The third Booke. The fourth Chapter. Fol.

The inner part of the Temple or Pantheon.

This Figure following sheweth the Pantheon within, which same (as I said) is taken from Sphera, because it is to wise from one wall to the other as it is high from the pavement to the open place upon the top thereof, which is nine and a half palms and half from the pavement to the highest: and from the Cornice to the highest part of the roof is also the same measure, that is, each the halfe of one hundred ninety and seven Palms. The Sides of the roof ar all like that in the middle: and it is thought that they were also beautified once with Diuer Plate by certaine remains thereof remaining to be seen: for if they had been of Copper, they would yet be seen there, as else those over the Postals would also have been taken away.

Let no man wonder that in these things (requiring Perspective Arte) that there is no Pavement or other squatting same, but I make it only out of the ground to shew the measure of the height thereof, that you might not mistake it by Shortening: But in the Book of Perspective Arte these things are shewed in their right shortening manner (and that in divers ways) that is to say, in Superficies, and many bodies, and divers sorts of bodies, serving thereunto: I will not now set downe the measure of Capitaces downwards, for hereafter I will shew the Figures piece by piece, and thereof let those a several measure.

The Chappell in the middle, although here it saith well with the other, yet many men are of opinion that it is not ancient, because the Arch thereof is out the Axe pillars, which is a thing never done by good Antiquities: but it is thought that it was made greater in the Christian time, as the Christians Temples alwaies have one principal Altar which is greater then the rest.
Of Antiquitie

This Monument is yet standing above the Portall of the Pantheon, which is made in this manner, all of Copper plates, the balsie Circle is not there, but there was a circled Superficies firmly made of Copper: and many men are of opinion that the beautifying thereof was of Silver, for the reasons so followed; but whether it was, it is not well known, but it is true, it was excellent faire works, considering that which is yet to bee seen.

This figure here under let volume, sheweth the manner of the Portall within, the which both on the sides and before is well set out with spangles, and also without, although by continuance of time is much defaced. The four Pillars are camed with such a number of Coins, as can be it here under let volume; and because this round Columne is thinner about then the Diameter, where the edge of border is the Architrave as is sheweth as the Columne: If a man would make the Architrave equal with the four corner Pillars, which letter not above, then the edge would have been perpendicular, so it would have wanted as much as the lettering of the round Columne. Thus the faithful broughteth thus place of the Architrave to rise perpendiculare above the four Pillars, because both things shew well. Touching the other, they are twelve Palms, and two minutes wide, and forty Palms and four minutes high. Of the other several measures I will hereafter speake at large.
The proportion of this Dole is already set down touching breadth and height, but the Pilasters thereof is the eighth part of the breadth of the dimension of the light; and although Vitruvius maketh Pilaster of Dorica and Ionica about the five part, yet this doth not sufficiently, because it is Corinthian; for the Corinthian Columnes are more lighter then others, yet it seemeth to be so much thicker then the sides are of a good dimension, so that a man's sight describing them all at one time, it seemeth not to be so small as in effect it is; the Pilasters on the sides and the Superficies of Architecture, upon them is laid to be all of one piece, and I say my part have some no division as setting therein: the particular measures stand here on the sides.

The Comice, Frase, and Architecture stands above the Dole of the Pantheon, touching the measure thereof, the Architecture of Superfice is the eight part of the light; the Frase, because it is incert, is a third part less then the Superfices; the Comice is as high as the Superfice; the other members are proportioned according to the greatness, whereby a man may finde the rest with the Compasse.
Of Antiquitie

To show all the parts of this most excellent and beautiful piece of work, it is convenient to turn it on every side, and therefore having the two sides thereof most accurately as it standeth, with all the things which you see before: now will I show the lodge, the Postall and the entering into the Temple, side ways as it standeth. Touching the measure, the thickness, and the height of the Columns and the Pillars, it is before set downe, and therefore needlesse to be rehearsed; it sufficeth only to see the disposition of the things within, which, although they be small, they are likewise and proportioned in their measure according to the greatness. The small Pillars at the going into the Temple are foursquare, in manner of Pillarsters, the measure thereof I will hereafter set downe, for they are also at the Corners of the Chapels, within round about the Temple, and as much as the space of these that into Columns hold, to serve reacheth the Copper rate, whereof I spake before.
The third Booke.

The fourth Chapter. Fol. 5.

Will not take me to write a very general cutting or hollowing of the Columns, whereof there are many in the Pantheon, but only of the Columns before the great Chappell, because they are very rare and excellent works. I will then something, to the which end the Figures marked with A. and B. shew the outward looks of the grounds of the Columns of the great Chappell, that is, in the flat and in the oblique side standing by touching the former and the fashion it is sufficiently showed in these two Figures; and thus will I then you the measures thereof. The Cannelis are four and twenty in number, every Cannel being nine minutes and a halfe broad, the Thorus with the two Aragals of life are both together some minutes and a halfe, so the Thorus is three minutes, and then there resteth a minute and a halfe, which divided into two parts, every Aragals on either side is three quarters of a minute. This hollowing please the beholders pulling well, and such hollow is upon the Fassada de foro transicio, so for the beautifying of a Gate, as it is showed in the fourth Booke. The Dalle marked with C. is the Dalle of the four Columns of the great Chappell in the Pantheon, whereas the height is two Dallees and eleven minutes and a halfe, which is in this manner divided, the Plinthis under is nineteen minutes high, the damoysel Thorus is seventeen minutes, and the Quaquete above it is six minutes and a halfe: the first Dalle of Trachila is eight minutes and a third part, the Quaquete under the Aragals is halfe a minute, so is the other above the Aragals, the two Aragals are six minutes and a halfe, and so each Aragals is three minutes and a quarter. The second Dalle of Trachila above the Aragals is five minutes, the Supercilie (so named by Vincius) of the Quadrato under the second Thorus is one minute: That Thorus is seven minutes and two thirds part high, the Circle, that is the bond of the Column, above the Thorus, although the Dalle be not one, is three minutes; the Profile of this Dalle is six and twenty minutes proportioned in manner as it is here showed.
Of Antiquitie

This Figure following represents a part of the Pantheon within, that is, from the pavement till you come by to the second Comice, which heareth by the Tribune or the round roof; and also about the Comice you for the beginning of the square space following of the said Tribune: This Figure also in the smaller part describes the circumference of one of the first Chappel's, wherein two are in some of the half Circles, and the other four in some of the Quadrangle; yet in how they come all to be of one frame: each of these Chappels have two round Columns, and the corners have their square Pillars, as you may see in the ground of the Pantheon aforesaid, and in this Figure following. And although it be not set in perfect manner, whereby a man might see together it were a round or square square Chappel, that is omitted because of the measure thereof; notwithstanding this is made for a square square, which you may see by the frame of the blind windows which are within the Chappell, for those other should frame more about. The thickness of these Columns is five Palms these minutes last, the height of the Bases is two Palms and one and twenty minutes, the height of the Columns without the Capitals is fourteen Palms, the height of the Capitals is five Palms and thirty minutes, and to the whole Column with the Bases and Capitals is fourteen and eight Palms high. The height of the Architectura, Frise and Comice, are altogether thirteen Palms and a half, and this height in all is devided into ten parts, whereof three parts are for the Architectura; the other three are for the Bases or the Frise, and the other four parts are for the Comice: Touching the rest of the other members, I set downe no measures, because this is proportionably declared touching the principal of them that stand on the line thereof marked with P. And in truth, a man in this Comice may perceive the vauntious skill of the workman, who thereby touching the minuties, would not cut any beastes therein, whereby not to fall into that common course, whereby in many ancient inchoemen have fallen, and at this day make modern inchoemen. Wherefore I mean is this, that all the corners wherein mutiles stand, and under those denticles cut in them are vicious, and by Vitruvius are erected in the second Chapter in his fourth Book: and although that in this Comice the same of denticles are, notwithstanding, because it is not, it is not to be condemned in this respect. Above this Comice there is a Podium, as a manner of bearing out, whereof the height is seven palms and five minutes, which commodiously serve out, for the Pillars stand not out from the Wall: the height thereof, together with the Architectura, Frise and Comice, is fourteen Palms and the height and thirty minutes, which height being devided into ten parts, the one part shall be for the Architectura, Frise and Comice, the which Architectura, Frise and Comice proportioned according to the greatness, stands marked with the letter M. In this Comice, and also in the Architectura, the members are so well beated, part cut, and part bent, that it doth not the frame thereof, but rather the more, because bent members are mixed with the cut members, and so you see a wonderful grace in them: the window above the Chappell is to give light to the same Chappell, which light, although it be not principal, nevertheless, because it is radially shaped up by the hyperbolic open place, it giveth the Chappell the divine light: between the Pillars, and also above the windowes, there are many fine stones intermixed, and the Frise of the first Comice is fine polishing stone.
The third Booke.

The fourth Chapter. Fol. 6.
Of Antiquitie

This figure sheweth one of the Tabernacles which stand betweene the Chapells, and the Pillars on the sides represent the four square cornered Pillars of the Chapells, here againe you may see the notable judgement of this workman, who looking to ouer the Architrave, Fresoe and Capitale close to the wall, and marking that the four square Pillars standing on the sides, were not so farre distant from the Wall, that a man might make the whole Proceedings of the Captive therein: therefore he made the same whence had the rest of the other members he turn'd into a Facie, whereby the work was more stately and accompanied with order. The two blinde windows are thought to have bene placed for Idols. The four of the Tabernacle 9, Palmes and 11, minutes high, the thickness of the Columns are two Palmes, the height chosen Palmes without Bases or Capitals, the Bases are one Palm high, the height of the Capitals are two Palmes a halfe, the Architrave is a Palm, of which also is as much, which is also of the post, but the height of the Capital is a Palme a halfe, the frontispiece 5, Palmes high, the Architrave above three great Pillars, it is a Palme and three quarters, the othermeasures that hereafter be theweto; of these Tabernacles there are thin with sharp geusts, and those with round geusts, that is the fourth part of a Circle.
These four Figures, as they are members of the Tabernacles in general, as the letters A. B. C. D. are these. Touching their measures, in height, it is thought before, and for the rest, it is sufficient for the workmen, that all things from members to members are set out in great, and proportionably with great diligence brought into this same, although it may be that such as study Vitruvius will think this Guide too high for the proportion of the Architect and Frater, and for my part I would not make it so high, but to be in the same in a place that hath great vanes, and which standeth not very high, it doeth yet to be good proportion. The Capitol is from Vitruvius order of writing, for it is higher than the Tabernacles, then Vitruvius marketh it with the Abacata, according to common opinion, they are the lowest Capitals that are in Rome, and not only the Capitols of the Tabernacles but also of the Capitols of the Towns, and so of the Capitals at the beginning, that I have not found a building of greater observation of order than this: but if I should write all that are in it, both within and without, I would presume to be more tedious, therefore I will make an end of this wonderful Building and speak of other Antiquities.
Of Antiquitie

This Temple of Bacchus in very ancient, and also whole through, and also for a place, separate of stones, Plaster, both in the pavement and in walls, also in the Tribunes, 93 round roese in the middle, and in the roofe of the round walkes, made altogether after the order of Composition: the whole Diameter within from Wall to Wall, is 100. Palms long, whereof the middlemost body lieth about with Pillars, contain yt 50. Palms: in the intercolonnes I find great difference to liken one to the other, because that the middlemost intercolonnes is spaces betweene the Colonnes where you come in, and out of the Portall are 9. Palms and 30. minutes; and the other eighteene against them are but 9. Palms and 9. minutes: those that are over against the greatest Choppelare 8. Palms and 31. minutes, and the other four Colonnes setting hold 7. Palms 8. minutes, and some 7. Palms 12. minutes. The hightnesse of the entry within and of the four corner Choppell one against it, falls to the intercolonnes, and so doth the hightnesse of the two great places or round Choppels their intercolonnes. The other places 22 Choppelare 7. Palms 10. 5. minutes bred. The measure of the Portall before, may be taken by the measure of the Temple, which Portall is round, and at the fore part before the Portall, there was a drailling place made in some of an Egg, which was 58. Palms long, and in the middle it was 140. Palms broad; and as it appeareth by the decayed monuments, it was full of Pillars, as it may be seen in the Figure.

The ground of the Temple of Bacchus
The third Booke. The fourth Chapter. Fol. 8.

Here before the word the ground of the Temple with the measure thereof, now in this Figure I will shew the Fortegraph thereof within, so without it is wholly undefin’d the height from the Pavement to the uppermost part of the roof is 86. Palmes, the thicknesse of the Columnes is two Palmes and 14. minutes; the height of them is 22. Palmes and 13. minutes. The height of the Vase is one Palm and 7. minutes. The height of the Capital is 2. Palmes and a quarter. The height of the Architecture is one Palm and a quarter, so much also the Front hath the height of the Cornices are two Palmes and a halfe. The particular members, as of the Vases, Cornices and Capitals, you see here under proportioned, according to their greatnesse, and marked in their several places. This Temple standeth without Rome, and is dedicated to S. Anne.
Of Antiquitie

The Pictographic hereunder placed is the aforesaid walking place before the Temple of Bacchus, with a large round about it, as you may perceive by some very ruinous pieces thereof, and about the same each hiero-

Temple of Bacchus (as I said) is full of many Dymamts, and of diverse Compartmentes, whereof I have described some part, but not all. The three inventions hereunder placed are in the same Temple, some of stone slabs and the other of Pfuister.
The third Booke. The fourth Chapter. Fol. 9

This Temple of peace the Emperor Vespasian caused to be made by the signal in Rome, which Temple is commended of Pliny, for it was much beautified with greater work and pillars of stones; and besides these Monuments of the said Temple, after the death of Nero, Vespasian caused all the Images both of Copper and Marble to be placed therein, which King Nero had gathered together out of divers places, which were no small number. Vespasian also placed in it both his own and his children Images made of a new kind of Marble brought out of Ethiopia, called Basalt, being of an Iron colour, a kind of Marble much commended in those times. In the said Temple and the principal Chappel thereof, there stood an Image of white Marble very great, made of many pieces, of which reliques there are many pieces yet to be seen in Campidoglio; and among other pieces there is a stone, whereof the Image of the great God is so great that I late.
Of Antiquity

This Temple is measured with Ells, and the Ell is divided into 12 parts, called ounces; the measure which
stands in the middle of the ground of the Temple is half an Ell. First, the length of the lodges about is 122.
Ells; the breadth is 13 1/2 Ells, the thickness of the places before in the lodges contain 10 Ells, the thickness
of the pillars at the entire is six Ells, and between the one pillar and the other is 10 Ells, the going in an
doth place, both of the Postall and of the Temple are 15 Ells wide, the length of the whole Temple is about 170.
Ells; the breadth containeth 12 1/2 Ells; the principal place in the middle of the Temple is 3 1/2 Ells. The sides of the
Pillarsers against the which the round Colomnes stand are 9 Ells and a half, and the thickness of these Colomnes
are 4 Ells, 4 ounces and a half, and they are taller, every one having 24 Circles: the case of hollowing of each
Colome is 5 ounces broad, and the lift thereof one ounce and a half; the brest of the principal Chappel is about 32.
Ells, and is half a Circle. Those on the sides marked A.B. are 37 Ells broad, and goe into the Wall, which
is like then half a Circle; the thickness of the Wall round about the Temple is 73 Ells, although in many
places, because of the Ground, it is much thinner. The Circumferences of the Chappels are 8 Ells thicke, betweene
the one Pillar and the other, it is 4 1/2 Ells; you may conceive the quantity of the measure of many places and win-
draws with other particular things, by the measure of trow and by the Figure is propounded. Touching the Astro-
nomers, which is the Figure hereafter following, because the ground is all covered once with the ruins thereof, I could
not measure it from the Ground to the top, but as much as I conceived by that part of the ground, and all the walls
which are there to be seen, I make this piece standing upright. I am not certain whether the Colomnes have this
pedestall under them or not, because that men cannot see the foot of the Colomnes. And although that Plini much com-
mendeth this Building, yet there are many unsane things in it, specially the Cornices above the Colomnes, which
are not accompanied with anything, but stand bare and naked alone.
This Building is called Temple, it is made altogether of a kind of rough stone, which is here called Tubatum, after the manner of Tiber; but so that the stone is smooth and full of holes, it was covered all over with a kind of plaster called Stucco, it is very rubbish, for therein you see no proportion of imitations; moreover, I have placed them in the ground where I thought them fittest to stand. This Building is measured with an other Mile, which is divided into 60 minutes; so the line through the middle of the ground of the Temple is the third part of the said Mile. First, the Columns are an Elle & 18 minutes thick; the inter columns are 3 Elle and 14 minutes, the breadth of the gates is 8 1/2 Elle and 14 minutes and a half, the thickness of the wall is one Elle and 20 minutes, the length of the Temple is 18 Elle and 20 minutes, the breadth of the Temple is 8 Elle and 30 minutes; the gallery round about the Temple was not roofed withய square passages but both the broad place before the Temple was called I cannot discover, because it is so ruinous. The columns of this Temple have no Bases nor any Chimney or Proscenium, but stand bare upon their ground; it is well made of Tubatum, and covered over with Stucco. This Temple had the frontispiece both behind and before.
Of Antiquitie

The height of the Columns with the Capital is 3 minutes less than 10. Elles, the thicknes below (as I said before) is 1. Elle and 18 minutes; and the thicknes above is 1. Elle and 15 minutes. The height of the Capital is 10 minutes, but the base of the cinct of the Columns are also reckoned with it; the height of the Arches in the space is 36 minutes, the height of the Plates is 1. Elle 55 minutes. The Concise 1. Elle 5 minutes high; from thence upwards, the Triglyph is two Elles and two minutes high. The other particular members marked with $e$ characters are in greater force, and accordingly proportioned.
At Tinoe this Temple standeth upon a Riuier, it is called the Temple of Tinia, the most part thereof is ruinated; it was well wrought after Corinthian manner: before it is raised up from the earth as the tale thereof standeth, but behind is more than 7 times of Wall under the Tale.
Of Antiquity

This last Temple is measured with the last Cyle of 65. minutes, and first, the Columnes are one Cyle and 17. minutes thick; the intercolumnes 2. Cyles and 34. minutes; between the Columnes and the Wall is 2. Cyles and a halle; the thickness of the Wall is an Cyle and 13. minutes; the Pavement of the Temple within is 12. Cyles and a halle; the Pedestall marked A. with the Columnes and their ornaments issue for the whole order of the Temple. The height of the Base of the Pedestall is 45. minutes, and the height of the Pedestall is 92. Cyles and 48. minutes. The Casmbe is 37. minutes and a halle high, the height of the Base of the Columnes is 88 minutes and a halle; the Depth of the Columnes is 10. Cyles high; the Casmbe is one Cyle and 44. minutes high. The Arbitrane, Friese and Cornice all together are about two Cyles and a halle high. The Doore marked with S. Y. is 9. Cyles in height, the breadth of the light inner is 4. Cyles 4. minutes, but the Edges above is 3. Cyles 54. minutes, the which is incised above, according to Vitruvius doctrine. The Antepagamentum is 52. minutes and a halle broad, but the Supererise [because of the lettering] is but 51. minutes; the Friese is 30. minutes high, and the Cornice 24. The Window marked with T. X. is one Cyle 45. minutes and a halle broad, the height contains 5. Cyles 3. minutes, and is lettered above, as the Doore is. The Antepagamentum is 31. minutes and a halle broad, and the Cornices containeth as much; but the other particular members, are in greater order marked with the same letters let by them, and well proportioned; This Window is wrought both within and without.

This is the third part of the common Cyles of 65. minutes, wherein the Temple ascends, and the aile is measured.
The third Booke.
Without some this ruinous Temple standeth, and for the most part is made of Stones, none so none of these cornuena's therein which I have here placed in Figure; but as it may be concealed by the ground thereof, and also considering the proportioned height, it was made of that fashion as the pieces marked A. B. standing by the ground doe shew. Thus we have the measure of the Jchnographie of the ground of the Temple, by the which measure a man may conceive the figure of the Ortygraphie. This Jchnographie or platforme, is measured by the side Romano Palme: and first, the base of the Temple is 24. Palmes wide, the Diameter of this Temple is 69. Palmes and a halfe: the two places on the sides are as wide as the Doore; the Entrance of the latter Temple is also of the same breadth, so are the four Chappells also where men goe in, of the same broadnesse, but backward they are wider, because the walls of the side rooms to the Center of the Temple, and these four Chappells (as it may be conceiv'd) receive their lights from the sides: the Diameter of the small Temple is 5. Palmes long, the little Chappells, both they that are balldowed out, and those that are elevated, are 3. Palmes bread: but of those four elevated or capped Chappells, I cannot tell how they ended above, for there standeth not so much upright as a man may conceive any thing thereof certainly, but only a beginning above the earth; and (as I have said) although a man cannot see in what manner this Building stood above the ground, yet according to my concept, I have made this Ortygraphie. And therefore on the one side marked B. representeth a piece of the great Temple, and the other marked with A. representeth a part of the latter Temple.
Of Antiquitie

This Temple placed under this is without Rome, and is very much ruinated, and by the most part is made of Brick. It is not very great, it cannot also be discerned, that it had any light in it but at the doors, and from the windows above the Cornices. And all the rest of the holes were placed for holes of such like things; the measure of this Temple was lost by the war, but yet I remember well that the Temple was a full Scapent and a halfe, as well on the ground as above; therefore I set down no other measure, but a skilful workman may help himself therewith by invention.
The small Temple is of no great compass, and all made of Stone; it is measured by the side Roman Palm: the length of the lodge or Gallery is 40 Palms, the breadth thereof 16 Palms, the Door is 10 Palms, the places in the walls within, are all of one thickness, that is, 14 Palms; the space between them is 6 Palms, the rest may be guessed by sight: so I guess the height from the Foundation to the Architrave to be 40 Palms, and the Architrave, Pedestal and Compe to be 9 Palms tending the rest; I made an account that if I allowed a Palm upright for the round rafter, then the whole Temple should be about 70 Palms.
This Temple is without Rome, made part of Marble, and the rest of Brick, it is much decayed, it is thought that it was a Sepulchre, and on all sides it is right low square; for the one Wall to the other is 30 Palms broad, the thickness of the walls is 2 Palms and a half, the wideness of the Chappel is ten Palms, the Door is five Palms broad, the height of the Pillars both Sides and Capitals is 22 Palms and a half; the thickness of the Pillars is not much above two Palms: The Architraves, Frieze, Cornice are 4 Palms high, from the Countere to the height of the roofs is 11 Palms: the height of the Houses of the Chappel is 20 Palms.
This Temple byas once Was A Tuoli by the River, much Deserted, which had the frontispiece Before and behind the Columns, on the sides are more then half destroyed, the wall the breadth of the Temple from the one wall to the other, is 11 Elles Measure by the same Measure that Templum Precisivs was measured within, the length of the Temple is 8 Elles, the thickness of the wall is one Elles and 11 minutes, the thickness of the Columns of the Portall is an Elles and a third part, the height of them with Bases and Capitals is about 12 Elles, the height of the Architrave, Facia and Comice in three Elles, the front face from above the Comice to the height is 3 Elles, the height of the basement is 3 Elles and a half. In the Front before, there is no show of a Door, nor of any pieces in the Walls, by reason of the Rothenticke, thereof, but I have drawn it out thus, to make the more Plain, because I judge it had been so, neither can you see any Windows in the walls nor doors, even behind, although I have placed them here in the ground, where I thought best. The measure of the members both of the Basement and the Comices, above, I will not name particularly, so they are proportioned according to Antiquity, whereof you may see some parts.

The third part of the Coll also is thus.

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The third Booke.

The fourth Chapter. Fol. 15.

This Temple hereunder let picture is A Tuoli by the River, much deserted, which had the frontispiece before and behind the Columns, on the sides are more than half destroyed, the wall the breadth of the Temple from the one wall to the other, is 11 Elles measure by the same measure that Templum Precisivs was measured within, the length of the Temple is 8 Elles, the thickness of the wall is one Elles and 11 minutes, the thickness of the Columns of the Portall is an Elles and a third part, the height of them with Bases and Capitals is about 12 Elles, the height of the Architrave, Facia and Comice in three Elles, the front face from above the Comice to the height is 3 Elles, the height of the basement is 3 Elles and a half. In the Front before, there is no show of a Door, nor of any pieces in the Walls, by reason of the Rothenticke thereof, but I have drawn it out thus, to make the more Plain, because I judge it had been so, neither can you see any Windows in the walls nor doors, even behind, although I have placed them here in the ground, where I thought best. The measure of the members both of the Basement and the Comices, above, I will not name particularly, so they are proportioned according to Antiquity, whereof you may see some parts.
Of Antiquite

Although at the beginning of this Book I said I would speak only of Antiquities, yet I will not omit without some mention of some modern things made in our time, and specially, because our age hath flourished with so many good artists in the invention of Architecture. There was in the time of Pope Julius the second, a workman called Bramante of Casteldurante in the Duchy of Volturn, who was a man of so great understanding in Architecture, that it might be said (by means of the eyes and performances which the Pope gave him) that he copied by good Architecture again, which from ancient time till then had been hidden and kept secret: which Bramante in his time laid the foundation of beginning of the wondrous building of St. Peter's Temple in Rome, but being prevented by death, did not only leave it unfinished, but the model thereof also was left imperfect, wherein divers ingenious workmen sought to build themselves both to perfect and finish it; and amongst many others Raphael Durbin, Papiner, a man also very skilful in Architecture, following Bramante's steps, made perfect this design, the which in my opinion is one of the fairest thoughts that are to be found, out of which the ingenious workman may help himself in many things. It will not set beside all the measures of this Temple (because that it is well proportioned) and a man may by part of the measure find out the rest. This Temple is measured with the old Romanes Palme, and the broadest walks therein is 92 Palmes broad, those of the sides are but halfe as much: by these two measures you may guess the rest.
Of Antiquitie

In the time of Julius the second, there was in Rome one Balbazar Pietruccio of Sienat, not only an excellent Papister, but also very skilful in Architecture, who following the doctrine of Bramain, made a modell in some hereunder set downe: whereunto he thus wrote, that the Temple should have four gates to go into it, and that the high Altar should stand in the middle thereof: of the four Cornes he made four Sacriles, upon the top whereof men might place the Clichetowers by ear ornamented thence to, and the last part of these thence lookt into the Cile. This Temple is measured with the other beemes, being one, it is in the middle from one Pilaster to another 5.4, Pilastre, the Diameter of the Circle in the middle is 18.4, Palmes long. The Diameter of the four small Circles is 19.3, Palmes. The Sacriles are 100, Palmes wide. The four Pilasters in the middle make four Voiles of Arches which breeke vp the Landhorn, and the four Voiles of Arches are all made, which are in height 27.0, Palmes, and above these Arches a Tribune erected by set forth with Columns, with a round Roost upon it, which Bramain espoused before his death, whereof the ground is here set downe.
The third Booke. The fourth Chapter, Fol. 17.

The first two Books set down, is the ground of the Tribute that should have gone about over the listed Arches, or Arches (as I may say, by sight) whereby a man may perceive, that Bramante in such cases was bolder to draw a piece of brick, then by what is here written; because to great and malleable pieces of stone should have an excellent foundation to stand very fast, and as it be made upon stone as Arches of such an height. And for confirmation of my speech, the stone pillars are not to the Arches without any other weight upon them, are already settled and secured, etc., and rest in some places. And hence, because the intention is large and costly, and a thing to give good instruction to a workman, I thought it good to place it here in a model: but not to be tedious in setting down the measures. I lett them some of the principal, the rest you may finde with the small Palme which standeth here within the ground, which breadth containeth 30 Palmes: the thickness of the first Column without is 5 Palmes, the thickness of the second Column within, is 3 Palmes: and the thickness of the third Column is 3 Palmes and three quarters. The wideness of the Tribune within, is 38 Palmes, the Diameter of the small Lanthorne within the middle, is 36 Palmes: the rest you may guess by the small Palme.
This is the Orthographie both within and without, whereone out of the Orthographie above set downe, whereby you may conceive the great make a waight which should here stood upon the four stairs, which waight may give any wise booke manes matter to consider, that it had beene fitter to set it upon the ground, and not in the ups upon such a height; and therefore I counsell all booke men rather to be doubtfull therin to call acts; for if hebee conditio, he will make his booke lUSER, and not despise another mans counsell, which doing, bee shall seldome faile: but if he bee rash and lone, bee will not take any other mens advise, but will trust only to his oane invention, whereby attemtites his booke doth him more shame then hoscredit; therefore I conclude, that fiowting procedeth from prudence, and presumption from small understanding; and I say, that doubtfullness, or doubtfullness is a vertue, making a man to think his knowledge little, although his understanding be great: the measure of this vertue is to be found by the allegores small Paine.
The third Booke. The fourth Chapter, Fol. 18.

This ground set under this, is also an invention of Bramante, though it was never made, which agreed with the old taste: that part which is marked with B. is S. Peter's Church in Monza, without Rome, and that part marked with A. is an old Cloister, but that part in the middle, Bramante adorned, thereby to give himslfe credit: the old taste: the place marked C. is intended a Gallery with four Chappels in the corners. The place D. towards under the age: the part marked E. is a little Temple, to which the said Bramante added: the measures whereof make the body is much greater some in the least ensuing. I have said nothing touching the measure of the ground, but I hoped, this here only for the invention.
Of Antiquitie

I. the hallsad I promised to New Hermonis Temple in greater Rome, which is not very great, but was only made in remembrance of S. Peter the Apostle, for it is said that he was crucified there: the said Temple is to be measured by the old Roman foot, a high foot is twelve fingers, and every finger is three minutes: whereof all you shall find the measure by the Roman Palms, computed the said twelve fingers. The Diameter of this Temple is of five and twenty parts, and two and twenty minutes. The thickness of the Wall round about the Temple is seven foot, the thickness of the Columns are one foot and a half. The thickness of the Door is three foot and a half: The Doors are both the round within, which go round about the Temple, due to the Laver of the Temple above the Columns: the thickness of the Wall is five foot, the rest of the other measures you may conceive by the next.

The hall of the Roman sects:
The third Booke.

This is the said Temple standing by, which

the upper one half without, and the other

half within, and is made altogether after the

mode, as you see by the Figure. I will not

speak of the particular measures for, by the

ground you may conceive this whole

brought, for that part (though it be small) is set

before by the measure thereof, and seem the

great reduced into the small.
Of Antiquity

Now I have showed the outside of St. Peter's Temple, in this I will shew the innermost part, which is made with such proportion, that the workmen by the breadth of the ground, may finde all the measures: and although that this Temple thrusteth to high for the breadth, for that it is thought and there to be as high as it is broad; especially standing, by the opennesse of the windows, and the Kitchen or Chapells that are in it, the height thereof is not amisse, and especially by means of the double Comices, which go round about, and cover much of the height together with the Proclature, the Temple sheweth much more as it is,

The style of the Romane面包, depicting this Temple as modelled.
This Building is without Rome, at St. Sebastian's, and is all fallen below to the ground, especially the walks about, but the Building in the middle (because it is very faire stonge) is yet whole, and is made of Bichet: you see no ornament in it at all, it is dark, because there is no light but at the Doore, and about the four hollow places in the wall, four small Windows. The ground of this house is measured with the old Roman Palmes, and the length with the breadth, which are measured with rods, and every rod is ten Palmes. First, the walks; Gallery marked A. is 3 rods and 3 Palmes: the breadth of the walkes is 32 Palmes: the thickness of the corner Pillars, with all their members, is 12 Palmes: by which measures you may examine the rest. Touching the Building in the middle, the place B, is disenclosed, and is in length 7 rods and 6 Palmes: the breadth is 3 rods and 4 Palmes: the part marked C, is covered, and contains 4 rods in four square. The four Pillars are ten Palmes Bichet: the thickness of the wall round about the round Building, is 24 Palmes: the place marked D is roof: and that part in the middle is a masse, which breareth the roofes: in the middle whereof, there is an opening: and this masse is beautified with many hollow statues in it, which stand right, and accompany those that stand in the wall: touching the heights (because of the hollowesse) I measured it not; and especially, because there was no beautifulnesse of Building.
Of Antiquities

This Theater Augustus made in the name of Marcellus, and therefore it was called the Marcellus Thea-

ter. It standeth built in Rome, you may at this day part of it standing upright, that is part of the Colosseum is the

one: it is in one of the rules, that is, Pista and Tenia, a sort of a, in truth, that is much commended, although

the Doricall Columns be no more, nor any Stairs or Banquet under them, but stand plainly without any

thing overer, upon the flat ground of the Colosseum. Touching the ground of this Theater, men could not tell concerning

it: but not long since, the great Patron of Rome, going to make a house, the situation whereof was to be set upon

part of the Theater (this house was made by one Balchalar of Itamna, an excellent workman) and as he caused the

foundation to be digged, there were found many relics of diverse Comices of this Theater, and a great part of the same

Theater was discovered, whereby Balchalar cutted the whole frame thereof, and measured it with great circumspection,

placing in the home following: the first being at that time in Rome, also many of the Comices, and sound

friendship to measure them, and, in truth, there I found as excellent houses as ever I saw in any old place, and most

in the Capitals of Rome, and also in the temples of the Romanes, which, me thinke, are well with the doctrine of

Vitruvius. Likewise the Frate, Lighten, and Petilopen, agree well enough: but the Grecian Comices, although it be

very full of members, and well known, yet I found it to differ much from Vitruvius instructions: for being licentious

enough of members, was of such height, that the two third parts of such height should have been enough to the Archi-

tect and the Frate. But I am of opinion therefore, (by the licence of these, or other Antiquaries) that a workman in

these ages should not err, (which err, I mean, is to be contrary to Vitruvius precepts) not to bee preceptomy that

bee will make a Comice, or other thing well of the same proportion as hath been made and measured, and then let it in

works; because it is not sufficient for him to say, I may doe it: so ancient workmen have done it, without consider-

ation whether it be proportioned according to the cell of the building. Besides, although an old workman was to hold,

yet we must thereto not belee, (but as reason traueth he) wee should obserue Vitruvius rules as our guide, and most

certaine and infallible directions: I say from that time of great Antiquite, still now, there is a man found to have

written better, or more legibly of Architecture then he, and as it were there is one more learned then another,

to whom truth only is given, that his words are truly, and without doubt beleeue. Who then will believe he be not

ignorant, that Vitruvius, for Architecture, is worthy of the highest regard, and that his writings (where no other nota-

table reason or cause to the contrary) ought to be the touchstone thereof to be immediately observed, and to be more

credited, then any words of the Romane, which Romane, although they learned the upright manner of building the Cre-

etum, nevertheless afterward when they became inferiour under the Grecianas it may be that some of them thereby became

licentious: but certainly, a man might be the wonderfull judge by which the Grecianas then did make, which are

now almost all spoild and cast aboue the cell of (where) bee would afterwyds cast the Grecianas words to impresse that

of the Latines force.

Wherefore all these workmen that shall commend Vitruvius writing, specially in such cases as are clearly under-

stood, as in the order of Dorica, where I spoke, should more in the Art of Architecture, so gainfully such an Author,

as so many pieces hath bene, and yet is approved by wise men. Learned judicious men made this digestion,

which was necessary for the good of those that would not have considered so much, turning againe to the purpose, I say,

that this ground was measured by the old Romane foot, and the foot, the place in the middle, marked A. Which is called

Ditchett, is in the Diameter 194, foot, and is halfe a Circle from one corner to the other: of the Sages of seats,

marked B. It is 417, feet: the place marked B. called Pultenium, is very ignominy; and where C. Marked, is the

Gallary, which they call Portions of the Scene, in the middle whereof stand the Bulbus: that part marked with D. was

a Portal, with Statues on both sides, which went by to the places marked E. called Hospitallia: the two Gallaries on

the sides marked C. They liked to make in: Of which things, men can so no more above the ground, so that they

are covered with other houses. Touching the severall measures, as well of the Scenes as of the Theatre, and of the do-

gre, I shall not name more so that in the Amphitheatre called Coloso, I will declare it more at large, whereby a man

may conclude how this stood: but that part without, which went about the Theatre, I will tell you in the second Figure,

which was measured (before this) with a common Cal, which is divided into twelve parts, which parts are called

ounces: and every ounce hath five minutes, of which Cal, this is the third part.

The third part of the Cal.


Of Antiquities

This Figure following representeth that part without, of thefored Meathe, and is measureth with the Ar
defcape; and first, the thicknesse of the Columns beneath in the mother part of the first order, is an Ell and 4.3.
minutes in Diameter: and the thicknesse of the Diameter above under the Capitol, is an Ell and 16. minutes:
the height of the Capitol, is half the thicknesse of the Columns beneath, the which Capitol is more perfecter
marked in the fourth Book, in the order of Dioni, in Folio E. 3. And the same Capitol is marked with B. Likewise
also the in part, whereon the Arch resteth, is as high also as the Capitol, and standeth also in the same table E. 3. The
Pillasters, besides the Columns, are 19. minutes: the thicknesse of one Arch, is 7. Ells and 9. minutes: and the height
is eleven Ells and firetane minutes: the height of the Architrave, is 49. minutes: the height of the Frate is one
Ell and eight minutes. The height of the whole Column, is an Ell, and fourteen minutes: the thicknesse of
the second Arch of the second order, is as wide as that below; but the height is ten Ells and fourtie and eight minutes:
the height of the Pedestall under the Columns of this second order, is an Ell and fourtie and eight minutes: the
thicknesse of the Columns, is an Ell and twenty firetane minutes: the height of the same Columns without Bases or
Capitals is 11. Ells, 27. minutes: the height of the Bases is 44. minutes: the height of the Capitol, that is within
the Volutes, from the list of the Columns, to above the Capital, is 36. minutes: but the Volute hanges over the Arch,
gall or Boral 20. minutes and a halfe, which in all, from beneath the Volutes, to above the Abacus, is 47.
minutes and a halfe: and the breadth of the Abacus of the said Capitol is one Ell and a halfe: but the breadth of the Volutes is two
Ells; the height of the Architrave is 59. minutes: the height of the Frate is 58. minutes: the height of the Capitall is an
Ell, 48. minutes: which Capitall, in truth, is halfe so much more as it should be (if we will credit Vitruvius precepts.)
But I pray you, gentle Reader, esteem me not presumptuous, neither yet account me for a corrector of the
works of Antiquity, from whence men learn so much: for my meaning is only, willingly to let you understand and know that
which is well made from that which is ill made; and that I will not doe after my own conceit, as if you were taugh
by me, but by the authority of Vitruvius: and also of good Antiquities, which are those which best agree with the doc-
trine of that Author. The Bole of this second order, and the Pedestall under it, the Impall of the Architraves, and Volctall,
the Architrave, Frate and Capitall, you shall altogether find in the fourth Book of the order of Dioni in Folio K, the
second, and are all marked with F. Likewise you shall find the Capitall in the same fourth boke, behind in the tale I.
the 4. marked with M.

The third part of the fored Ell, of 60. minutes.
Of Antiquitie

I Dalmazia there is an ancient town called Pola, lying by the Sea side, wherein you may see a great part of a Theatre; in the making whereof, the erect workmen did help themselves with the hill wherein it standeth, being the hill by part of the degrees of steps to goe up, and in the place below, he made the Orchesira, Scene, and other buildings belonging to such a piece of work. And in truth, the ruins and the pieces which are yet at this day found, doe shew that it was a most beautifull and sumptuous piece of works of stone and workmanship; besides this, there you may see a great number of Columns, some standing alone, others with Pilasters, and some Corners with four square Pillars, and some half round, all bound together, and well wrought, after the Corinthian; for the whole work, both without and within, was made after the Corinthian manner. This Building was measured with a moderne 25 small sotce; which foot is divided into twelve parts, named ounces, whereof the one half hereafter followeth. The Figure hereafter following, sheweth the Architectonick, and also the Prospis of the Theatre, whereof this is the measure: the breadth of the Orchesira which is half a Circle, is in Diameter about 130. foote; the degrees of steps round about, with the two dores of Steps, are of 70. foote: the way marked T. comes even with the plane of the Pulpit of the Scene to the fourteenth Step. The breadth of the Portico round about the Theatre, is 15. foote, and the sides of the Pillars inward, is of 17. foote a halfe, but the feet-square of the Pillars round about the Gallery, together with the Columns, is whole about five feet in breadth, and from the one Pilaster to the other, it is about 10. foote wide: and this is touching the ground of this Theater. The two greatest Claudians marked O. are the Hospitallia, from the which places men went into the entrey or passing through, marked T. which comes by to the street, half way to the Steps, as you may perceive by the Porculiar marked T. and under the going through, is part of the going in. The Hospitallia is sixe and fourtie feet, the breadth of the Scene, is 21. feet, the breadth of the Porticus or Gallery before, is 27. feet, and the length is like the house; the building which standeth above the ground of the Theatre, signifieth the Porculiar, which is cut through the sides of the Theatre. The Arch marked with A. signifieth the going in, the second Arch C. and B. are under the Steps; the Courte besides marked with D. is the impoll of the Arches there needed no going up to this Theatre; for the hill abovesaid was level the workman therein, and men might also goe by to this Theatre from the Scene, because it was joined to the lower Theatre: but the Theatre of Marcellus is seperated from the Scene, and therefore the goings up were necessirary.

This is the halfe foot of measure, whereby this Theatre was measured with all the ornament.
Of Antiquitie

This Theater (as I have said) was very rich of ornaments, all of stone, and made of Coptinthis stone, very well and richly wrought, and by as much as is seen by the ruins which the scattering about the Scenes, was very beautifull of Columns upon Columns, both double and single, and also in the innermost and outermost parts, with divers ornaments of Doves and Windows. The innermost part of the Building is much ruined: and touching the measures, I can say little; but of the outermost parts, I will say something of their measures. The first, a rustickall of common order, wherein there is no Columns, is elevated from the earth, together with the whole Cornice, marked E, about 6. foot: the height of the first Pedestall, is five feet, the height of the Columns with the Halcs and Capitales, is 22. feet, the thickness of the Pillars, with the Columns, is 5. foot; the thickness of the Columns alone, is two foot and a halfe: the wideness of the Arches, is about ten foot: and their height twenty foot: the height of the Architrave, Frase and Cornice, is about five feet; the second Pedestall marked X, is of four foot and a halfe: the height of those Columns are about thirteen foot, the Architrave, Frase and Cornice, is four foot high. I let not downe the measures of the particular members, but in the figure you may conceive them, for they are toll of the same proportion: I let not downe the measure of the Scene, nor of the other parts within: only I have here set forth a part of the Posters of the Scene, which is marked P. And also the Cornice, Frase and Architrave marked F. was in the highest thereof: the Capitales marked S. were within, with some halfe round Columns, ravelled out of some pillars, things that were very well wrought: all which things (as I said before) are so sumptuous, both for stone and workmanship, as they may well be compared with those of Rome: the Cornice, Frase and Architrave, marked A. was in the highest part of the Theatre: the Cornice marked B. is the impost of the second Arch: the Architrave, Frase and Cornice, marked C. in the Cornice above the first Arch, the Cornice marked D. is the impost of the Arch: the Cornice marked with L, goeth above the rustickall basement round about the Building: this line hereunder is halfe a foot, of the whole foot wherewith this Building was measured. And wonder not, gentle Reader, that I let not downe all the measures more precisely: for these things of Poesy, were measured by one that had more understanding in calling, than in measuring.

The halfe foot, whereby this is measured.
Of Antiquities

At Florence, an old Temple being by Vescezen, there is yet to be seen the fame of a Theatre, much decayed, being of no great workmanship, and little ornamented, so that any man may perceive by the same; for there are no pieces to be seen whereby a man may conceive any matter of importance. But you may perceive how the Theatre, there were some square Pillars, also the Stages thereof were very simple and plain; and because it is so much decayed, you can hardly determine how they were. The Scene of this Theatre is much different from others, so you may see in the ground thereof: in there is there so much standing above ground, that a man may perceive how the Scene and the Pulpit thereof stood. This ground was measured by the ancient Greeks, and first, speaking of the Orchestra, which is half a Circle, the Diameter thereof is 142. feet, and a half long. The body of the Theatre, that is, from the Orchestra, to the outermost of the Cross Pillars of the Portraitus, is 35. feet, the Pillars of the corner on either side, is 5. feet each: the entry of the Portraitus on the side of the Stage, is 3. feet: the Bank under the Stages, is 22. feet: the thickness of the Wall about the Orchestra, is 3. feet and a half: the Banks under the Stages, is 22. feet: the thickness of the Wall about the Orchestra, is 3. feet and a half. The place Marked D, should be the Pulpit near the Scene; but there is no show of any Columns; but it is certain that there was a wall standing by the latter side. The breadth of this place, is 19. feet and a half. Without this Theatre there standeth the foundation of two Buildings, but they are so much decayed, that you can find no end of them: nevertheless, the Building marked E, so much as you see of it, is breadth that it was joined to other things. The breadth thereof in the E, standeth, is 31. feet. The 2. small places of Columns holding up the one side, are eight foot and a half; and on the other side, ten foot and a half. The Arch where the four Columns stand (which I take to be made in that manner) are in length 27. feet and a half, and in breadth ten feet and a half. The breadth of the Building marked E, is twenty feet; the hollow places in the sides, are 17. feet: the length of all together, is 60. feet, and is distant from the Theatre one hundred and one and a half foot; and from the other Building, fourteen feet and a half.

The hall of the old Temple.
Of Antiquities

The figure under this, marked A. I think it to have been the scene of a Theatre, as standeth betwixt Fonsi and Taracina; but there is so little to be seen of the Theatre, that I measured it not: neither did I measure this part of the scene, which is more received than it is worth here but as I sat on horseback, I made a sight draught thereof. The Pope marked B. standeth at Spoleto, and is very also, made after the Doria manner, which otherwise I did not measure, but made only the invention and some thereof. The Site marked C. is between Follina and Rome, cut in the first; and although it was a circulation and unformed thing, that the Arch should break the passage of the Arch-frame, Frieze and Cornice; yet neverthelesse, the intention pleased me not. I measured only the breadth and the lenth, the which I found to be eighteen feet, and one and twenty foot a half. I think it had been a small Temple, as a Hermitage; but by what it will, it the tenth wall to a man's sight.
It is said, that this building was called, Domitus, of Pompeo: otherwise, that it was the house of Varro, but it is called by the Common people, Caracalla: which building, as large as I can name, was only made for men to call themselves in, for there is no dwelling in it at all: and although this building at this day is almost decayed, yet it was deep great, and contained many places, as places by many houses of this building which are round in the earth, where the Line Bandech, is into the way to go from Campo Majore to the Severa place; and where the Temple is now, the houses of Domina Castra stand; where G. Falco, is the Severa place: where the M. S. etc., is the marmelarum: where the C. Bandech, is the Church-yard of St. Salvatoris; and where the E. is, though, is the Front of the houses of Celsus: so that there you may see the great compass thereof. The third round things were Staircase to go up to the two upper storeys. And so that there is no force of stairs to be seen in those two, it is to be conceived, that there were open places to make water in, (for such things are necessary.) The ground of this work is measure by the same thit that the Theater of Marcellus was measure withall: which measure you shall have here, after the Division, and (half an Ell thirty minutes.) And first, the thickness of the Pilasters in the Illas and a half; the thickness of the Columns is two Illas; the inter-columns, are on all sides, nine Illas and a half; the Pilasters of the twenty Columns are so much more; the external Columns are over them; which Columns were made with good judgement, for they upheld the Corner by strength, and with beauty of work. Hitherto workmen may learn how to make Corners with Columns, and with Pilasters bound together, that the Corner may be strong, and as the Columnus is, which gather the Corner with the Illas, then if the same Corner was made along the Pilaster: and for the Corners which are square in, if you see them over the side in Diagonal manner, where the two round Columns cover the Corner, then they put some imperfect Corners, and specially, because they are none on all sides.
Of Antiquitie

During the Ichnographic, I have said enough; nor do I mean to speak anything of the form above the ground, although there is not much thereof to be seen: nevertheless, there is yet so much standing upright (although it be hidden) that thereby the backe part thereof without, is to be conceived, which, in French, is an ingenious invention, for a tall work, and especially in the first order, which you call Doric, although it hath neither Architectura, Triglyph, nor Comice: But yet there is the forme, and that very subtile made, with great strength and wise Building (as well of hard stone as of Brickes) as you may see in the Figure following. The thicknesse and breadth are shewed before: the heigh of the Columns with Bases and Capitalls, seventeen Elles: and the heigh of the Arches, fifteen Elles. The heigh of the Cameo, that is, the faulting above the Arch, is 2 Elles: the heigh of the binding, which is in Strow of an Architectura, is 2 Elles, and so much is the Fauce about it. The second order seemeth unsupportable, for that there is a weight of Pillasters standing above an open hole; a thing which in truth is false; erroneous to speake in reason. Neverthelesse, let that the first Order is so tall and strong, by means of the faulting done above in the Arch, as also with the strength done upon it, with the fault Fauce upon it, and by reason of the good strength of the Arch, which altogether make to be such a strength (as in effect it is) that the Pillasters that rest upon it, came not to oppose the targe, as they would, if it were a simple Arch, with an Architectura, Freize and Comice; to which cause I blame not this invention therein. The thicknesse of this Arch is 4 Elles: the height is nine Elles: the breadth of the Pillasters, is two Elles and an halfe: the thicknesse of the Columns, is an Ell and a third part in Diameter: the height of the Columns is eleven Elles and an eighth part with Bases and Capitalls, and are made after the Corinthian manner. The height of the Architectura, Freize and Comice, is two Elles and three quarters. Although I anie no particular measures of this Comice, Freize and Architectura, because such things are not to be done, yet there is surely so much well, that thereby a man may conceive the Freizes, Comices and Architectura.

The third part of the Ell, wherewith this is measured.
Of Antiquities

Among other faire Antiquities in Rome, there are two Columns of Marble, all cut full of Histories, very good im-
both worke. The one is called Antonianas Columnne, the other Traiani Columnne; and so they Traiani
Columnne is the wholsel, I will speake some whereof of this Columnne. as men say, the Emperor Traiani
caused to be made, which is all of Marble, and made of many pieces; but to closely joined together, that they seeme
to be all one piece; and to give the particular measure thereof, I will begin at the stone of the Base ment thereof: And
first, the degree 35 step in the first cell, is this Palmes high, the Pithum of the Bale, is a Palm and eight minutes
high; the square of greater Base is as much: the flat of the Balement is 12. Palmes and six minutes high: the greatest
Comite is a Palm and 4 half high. The place where the Felken hangeth in, is two Palmes and ten minutes high:
the Ingle Bale of the Columnmes, is five Palmes and 25 minutes, and is divided in this manner: the Pithume where
the Eagle standeth upon one corner, but you must imagine that there is one at every corner, is this Palmes and ten
minutes high; the Dypus above it, is three Palmes and eight minutes high; the Circle is ten minutes high. The
height of the Columnne, that is, the body, is 13. Palmes and 5 minutes: the Alteagal with the Interdants; stands once
the Columnne, is 10. minutes. The height of the Ortnine, is 2. Palmes and 2 minutes: the height of the Mascar, is 3.
Palmes and 11 minutes: above upon the Columnne, there is a Pedestal of a round stone, through which men crept to
the winding Stapes, and may goe easily round about, because the plane ground thereof, is 12. Palmes and a half base;
the height of this Pedestall is 11. Palmes but the Bale is two Palmes, and the Comite above, is a Palm high. The
Columnne above the Pedestall, is thus Palmes and a half high: the thickness of this Pedestall, is 12. Palmes and ten
minutes: the thickness of the Columnne abowe, is 14. Palmes, and the thickness below, is 16. Palmes: the rounds
which marked A, in set same, sheweth the thickness above: and the Circle marked B, is the thi geshe below. The
thickness of the winding Stapes, is 3. Palmes, and the Spillsource Palmes. The breed of the Balement, is 24.
Palmes and 6 minutes, in the which space are cut two Compartmentes, wherein is contained an Epitaph, under which
many Trophees are cut: and in the Epitaph are these letters hereunder written.

\[ S. P. Q. R. \]
IMP. CAESARI DIVI NERVAE F. NERVAE,
TRAIANO AVG. GERMANIC. DACICO
PONT. MAX. TRIB. POT. XVII COS. VI. PP.
AD DECAPANDYM QVANTAE ALTITV
DINIS MONS ET LOCYS SIT EGESTVS.

This Columnne is hightographed with excellent good cut worke, and Ortnine along with Berries: it is also thirtied in
Pedestall manner: in the bindings the Figures are made in such sort, that rising by 8 bearing out of the Figure, the
forme of the Columnmes and walking, is nothing disparaged, but there where Figures there stand some Lino看好, which
give light to the winding Stapes: and although the said Histories are placed orderly, yet they haue not the Histories
at all, and yet they are 44. in number, and I will shew the whole Columnne in the Figure following: but these are the
members thereof, openly written and ordoinne. All these members are measur'd with the same Roman Palmes, as
you find it before upon the round.
Of Antiquity

I have before sufficiently spoken of the height of Trajan's Column, and of the particular manner thereof, and I will now the whole Column proportioned as it is: So then, the Column marked T, representeth Trajan's Column; but from whence the Obelisks spring, we know not, and how they were brought to Rome, and to what end and use they served, I will not speak of, so that Ptolemy declareth it at large; only I will let the measure here, and shew the forms of some things which I have seen and measured within Rome: And first, the Obelisks, marked O, is without the Cape of, and is all graven and cut with Egyptian letters: the thickeurth thereof in the base, is ten Palmes and a halfe: the height is So. Palms: and this one was measured with the ancient Palm: but the other three by it were measured by a modern or visual Ell of 60 minutes, whereof the line that is betwixt the Obelisks, is the bally, and is divided into 30 parts. The Obelisks marked P. standeth in Vaticana, (that is) at St. Peter's, and is of Egyptian stone: in the top whereof (the top) the Ages of the Emperor Gaius Caesar stand: the thickeurth thereof below, is 4. Eiles and 43 minutes: the height is 43. Eiles and a halfe: the part above, is 15. Eiles and four minutes thicke: and beneath at the foot standeth these letters.

DIVI CAESARI, DIVI IVLII F. AVGUSTO, TL
CAESARI DIVI IVLII F. AVGUSTO SACRVM.

The Obelisks marked Q, iseth at St. Rochus, spoken in the middle of the street in three pieces, and men say likewise, there lieth buried in the earth a Lady called; Alia Augusta: the thickeurth benneth of the said Obelisk on each Face, is two Eiles and 24 minutes: the height is 26. Eiles and 24 minutes: the thickeurth above, holbeth an Ell and 35 minutes: the Base ment was all of one piece, and the Obelisk marked R, is in circa Anonimo Caracala, and is spoken, as you see in the figure. The thickeurth of the Obelisk, is nine Eiles and 55 minutes beneath, and above one Ell and 35 minutes: the height is 38. Eiles, and 15 minutes: and all the Pedestals are proportioned thereon. And although (præsumaturo) there are none of them in Rome, which I have not seen, yet those which I have seen, are here set bosome to your sight, as being but knowne.
Of Antiquitie

As Amphitheater of Remia, noted Colosseum, the two circuits to be made in the
of the City, as Augustus had build it before: the Intraiorr小時 divided into 4 parts (as the
is of 5) so that you may
and it the better, because of the
architectures therein. This
is marked by the ancient
and best, beginning at the east
parts: The pillars before
Palms and 6 minutes before
parts of the Columns is lower
but the Pillars on either
these Palms are 2. minutes:
store between 6 Pillars
but, the 4 pir-typical gable
hold 2. Palms: the
of the Pillars in the Los
Palms. The breadth of the
bebe is 22. Palms. The
two Palms both of them cast. Further
is towards the Center, because
from themselves. They not only
but by these stacks you may
because they are all laid
according to the same the
the last part of the 2. Intraiorr
the 1. but the Colosseum a
broader: by 6 Pillars are
The third Booke. The fourth Chapter. Fol. 39

The fourth Ground.

This Space, from the one Shore to the other, were Dykes where the People had equally.

The spaces, as you may better conceive of by this Figure, on the top of the pattern in the figure following. The spaces, as well as the steps, contain 6 steps or degrees for men to sit on; every degree being so broad, that a man sitting easily might go upon the same without troubling another. Within these degrees there were lesser steps, for safe, whereby one might go into his place, as in the figure G. H. as the degrees being 7, from the top to the bottom, so much the water voluntered, as also for more water, as you may see in the figure H. These degrees to sit on, hung also another good degree, that no water should flow upon them, which degrees were excellent for mall towered together, as in the figure J. Sciteth.
Of Antiquities

I have described the Architectural of the Roman Colosseum, in four steps, even like as the building is of four steps or

or four; now I must into the Basilica thereof, by which a man may conceive a great part of the inward things; therefore the Figure following sheweth the whole building about Earth, as ift were cut through in the middle. In which Figure, first you see all the degrees whereon the superstructures lay; there also you may perceive how many steps the going up were, which (in truth) were very easy to go by a damme, so that in a short time the Amphitheater was filled with a great number of men, without disturbance one of another. You may also see in the outward part, how the thickness of the pillars, and the walls upwards increased, which on the inside are drawn in, and being so drawn in, groweth the building great strength; and to show it to be true, you may see there, at this day, some part of the Frieze without, yet whole, from the top to the bottom, and yet the inward parts are decrept, and that hath the decaying inward in the Center done, which made the whole lighter, taking, as it were, a frame of a Pimemesh. But this is not observed in the common building in Athens, but rather the contrary, because the walls without are in Perpendicular manner, and lessen inward; and this they do (for want of ground) to get the more space upw ards, but that which helps such buildings, is, that there are no Arches in it, nor Domes, of any manner, that force the walls to give out, but the number of Walls, which are laid and that in the walls, bind the walls and the corners of the house together, and so such buildings stand solid so long as the names intact. which men from time to time renew: nevertheless, these kinds of buildings last not so long as the ancient buildings did made in such order as you see in the Colosse, whereas Pilla speak againe. And withall, (as I say) the innermost part being so rumorous, that men see no part of the innermost house, which is cut off by the line that hath what so Arocheides at the ends: and so that you see no parts thereof at all, whether the uppermost parts of the highest Steps, upw ards to the top, were all covered with double Galleries, as that the PotCount was alone, and the other left open: therefore I have made it in two manner of steps: the one is (as you see in the same Basilis) jointed with all the w ookers: and the other manner is, which standeth without the degrees of Steps, which latter also appeareth with the other, if you see it so, that the two sides in the Pedestals make each with the other: but for that you see some remainders of the creased Lines, which yet hang within on the walls, as the fourth ground therein, the which, I judge, was only a PotCount, and that the other part was uncourte to receive the people, and being so, must receive them better then if the Galleries had been double: Now how to turn to the beginning of the degrees or Steps, that I leave nothing untouched, as near as I can, I lay, by means of the ruins, and filling up with matter fallen, the planks, to the place in the middle is to filled up, that a man cannot make how high the first degree of the place was cleare; but by the indications of those that have come the end, the first degree was so high, that the wild and untamed Beasts could not hurt the beholders: and there was also a Building with other Arches, of a reconstruct breadth to go round about, as it is shewed where it is marked with C. The two open places, the level, and the greatest Arch, were to bring in light. The places standing up above the degrees of Steps which are covered and marked A, are Stages, whereby men went without, by the Stages to the Theater.
The third Booke.

The fourth Chapter. Fol. 31.

The profile of the Amphitheater of Rome.
Of Antiquitie

The outward part, that is, the Architectura of the Roman Colosso, is made of four Dores: and the first story next above the ground, is made after the manner of Doric: and although there are in the Frese neither Triangles nor Petitches, nor yet gates in the Architectura, neither Fullines and gates under the crowne, yet it may be called Doric. The second Doze, is after the manner of Ionie: and although the Columnes be not united, yet in effect they may be called Ionia. The third Doze, is after the manner of Corinthia, but some bookes without cutting, unless it be the Capitall, the which with their height are not explycetely made. The fourth Doze, is Composite; other call it Latinas, because it was invented by the Romans: some others call it Attica. Yet if it may well be called Composite, were it but for the mutiles which stand in the Frese, for that no other Story have their mutiles in the Frese, but that. Many men alse told, the Romans made this Building of four Dors, and made it not all of one same or other, as many others are, as that of Virona, which is all of rusticall bookes, and that of Pola also. A man may answere themunto, that the old Romains, as rulers over all, especially of those people, from whome the three former Doras had their beginning, would let those 3 generations one above another: above all those others, the Composite, as being by themselves, thereby signifying, that they as triumphers over those people, would also triumph with their bookes, placing and mingling them at their pleasures. But omitting this reason, we will proceed to the measures of the outerwall parts and Architectura. This Building was elevated from the earth two degrees: the second degree was five Palmes broad, and the first two Palmes; the height was little lesse then a Palmer: the Base of the Columnes was not two Palmes, but more is the Doras: the Columne is four Palmes thick, and two minutes: the height is 3 Palmes and 5 minutes, with Safe and Capitall: the height of the Capitall is about two Palmes: the Pilasters on either side of the Columnes, are nine Palmes and nine minutes: the circumference of the Arch is twenty Palmes, and the height is 53 Palmes: from under the Arch, to the Architectura is nine Palmes and five minutes: the height of the Architectura is two Palmes and eight minutes: the height of the Frese is five Palmes and two minutes: the Comice is as much. The Pedesfall of the second Doze, is eight Palmes and ten minutes high: the height of the Columnes, with Bales and Columnes, is five and thirty Palmes, the thickenesse is four Palmes: the Pilasters and Arches are like those beneath: but the height of the Arch is thirty Palmes: from under the Arch, to under the Architectura, is nine Palmes and five minutes: the height of the Architectura is nine Palmes: the height of the Frese, is two Palmes and nine minutes: the height of the Comice, is nine Palmes and nine minutes. The Pedesfall of the fourth Doze, called Composite, (here our Author hath forgotten the third Doze, but blosomuer, it diuerget not much from the Ionie) the Pedesfall of the Composite, is twelve Palmes high: the under-Safe thereof, is four Palmes: the height of the Pillars, with Bales and Columnes, is thirty eight Palmes and five minutes: the height of the Architectura, Frese, and Comice, is about ten Palmes, denided in these, one part to the Comice, the second for the Frese, wherein the Bottledoors stand, and the third for the Architectura. But for what cause, or reason, the Writermen let the Pillars in the Frese (things, which, peradventure, before that time were never made) I have deliverd my opinion thereon in my fourth Booke, in the beginning of the Doze of Composite. The Pillars of the fourth Doze are flat, and rise but little: all the rest are round Columnes, (that is to saie) three fourth parts, rising out of the Pilasters, the Statues above the bandlasses uphold some hames, which are bored through with holes for men to draw cords to cover the pale Amphitheater, as well against the Sunne as the raine: for what cause the Columnes are all of one thicknesse, and least not one more then the other (as it seemeth they should; and as Vitruvius woulde) as the second Doze are lettered a fourth part, I have also declared my opinion in the fourth Booke, and the ninth Chapter. In the treatat of making Columnes, longer or shorter, and that the particular members may also be noted, I have marked them also by the Architectura of the Colosso, which are proportioned accoyping to the principle, together with their Characters whereunto they are likened.
Of Antiquitie

If Biligello, a very old Temple in Italy, there is a very old Portico; Gates, the house wherein is Diletta, as though it hath neither Triglyphes, or perhaps no Guts: the two Towers on the first thereof may be called Posters twp; in regard of the Monuments above: which Towers are both of one fashion, although it was left one of them out. The Zipographie is underneath the Figure, and was measured with the ancient taste: and from one Tower to the other, are 60 and 10: note: the middle Tower is 20: note wide; each Postern: One is 10. note wide; the Pillars between the 2 Posters; Gates, are 10.: note broad; the height I let not; but only it is more than I expected it. The Statues under the Towers, with the ground, i.e. by our Fathers made on both sides; but according to his Ground, the Statues must come as they stand above the ground. As else not, then the ground must be made like P. This, and other things more (although there contrary no great matter therein) thought god to note, that you may know that I have set the Tower pace by pace as I found them.
The third Booke.

The fourth Chapter, Fol. 33

The Coleman, Basements, Bases, are relics of Antiquities: and that which is marked A, a piece of the Colummæ with Architrave, Frasæ, & Capiters; and also with the Basement above, which was all of one stone: the height thereof was 11. foot: and it was found without Rome by the river of Eber. The other marked B, was found in the foundation of St. Peter's, and Plinian ranked it to be buried again in the ground: in the same place: all the members also were of one piece; it was 6. foot high, and proportioned accurately. The Base marked C, is at S. Markes, very well wrought, of Corinthian work, but not very great: it is 6. foot high, and proportioned accurately. The Base marked D, was found in a place called Capranica, very well wrought: the height of it, is 2. Palmes, and was proportioned afterwards. The Base marked E, was not very great: it was found among certain remains, and by reason of the Arch of which it had above the Chorus, therefore I shew it to be Composita: and although I let some no other proportion of all its particular measures, yet they are collected and let alone out of the great, into the small measure above.
Among many Fope Antiquities that are in Italy called La arena, whereas this is the ground thereof, it also how the seats or steps stood from without, and up upon the inside, and so fit every one according to his estate and age. At the floor in the little above the Figure B, the seats have so few; at the also, both steps were placed, in the water and pools that fell down without from above, that water might fall off and not find below these two here below, and also of other fops all was measured with the fow therewith. The steps here, the thickness of the Pilasters, is 3 foot, and each Pilaster that beareth the Arches, one is 1 1/2 foot; and the 4 principal ones, at the bottom, going round about, is 2 1/2 foot, and 9 foot and a half broad, and also round to the board, and rest also. But at the two principal ladders, as it appeareth, in the ground: and then the measures, you may conceive.
there is an Amphitheater of stone work, with a pit where the seats are sold. The figure shows how the steps are made in the degrees, and the seats are numbered in the scale at the top of the steps. The seats are made somewhat circular in shape. In the inner part are many little boxes, like a rude stage. The greatness of this building at Pisa is measured and reckoned (speaking of the ante-room) 3 part: the flat pillars are 3 feet 3 inches and a half high; the width of the arches, 4. The pillars on the floor are 4 feet 3 inches in height; the roof is round; this is, in the middle, in the last, in the lowest part, is 5 feet 8 inches high, in the other 5 feet 5 inches high. The height of the pillar above the pavement is greater than the other. The rest of
Of Antiquite

Drifting the Frnowgraphie of the layd Amphiteater, I have set downe the principall measures, and partly spoken of that part which standeth upright: now I will proceed the outward part, which where can no otherwise be called, then rude and rusticall, and where the celle spoken of the thicknesse, and breadth, therefore I will rehearse it no more: note of the height I will say some thing: And first, the height of the first Arch is 23. foot: the height of the Pillers 27. foot: the fringe of the Archtrave, Frase and Cornice, is 6. foot high: the place both high above the Cornice, is 2. foot and a half: the height of the second Arch is 24. foot, and his sibertfis 12. foot: the height of the Pillars is 24. foot and a halfe: the height of the Cornice, Frase and Foreme of the Archtrave, is 5. foot and a halfe: the height of the Arch is 9. foot and a quarter: the height of the third Arch is 25. foot and a halfe: against these Pillars, as farre as a man may perceive, there were Images, of good diverse, as the third and last Cornice is 5. foot high. But I will not set downe the particular measures of the Cornices, for that I have set them downe with great diligence, according to the greatnesse in this small volume, which shall be the first Figures in the fowle following, and there belowe, the Pudoll of cutting of the outerside part of the Amphiteater shall stand. And thirdly, there shall be the Mezographie of a piece of the fine Amphiteater without, high in all brought after the rusticall manner, with names of Verona, being very hard: but the Cornices are somewhat better made: which Cornices have pilers and general frames of the Romanses, and are very like unto the Cornices of the Amphiteater of Pala. Touching the playnecesse of this Amphiteater, which by the Common people is called, La Cena, (taken from Cena) which is sands, which was therein drowndes certaine Places 30. footes, which were there presinted as Artes: and therefore I could not for the ground thereof: but as it was told me by some old men of Verona, when the Places were ther made upon the land, then presently there came water, in the sight of all the beholders, which pass through some Celliues, and in that space filled all the place full, so that there they might make battailes, and that one at another with Stones and Boates, in the water, and the places dried by angriness, as at the Sea. This, and many other things, men may believe, if we consider the great magnificence of the Romans, in the Antiquities of Verona. There are yet upon the great Siller of Rome two great ancient Bridges, between which two Bridges, there was a most faire and notable spectacle, whereat there might stand a great number of people, to behold the Places and places there made in Boates, upon the water: which Spectacle was made alwayes by the water side, against a hill: and higher upwards, abode this Spectacle, there was a Theatre, the scene wherof, and the Spectacle joinnt together: and for that, as I sayd before, the Theatre was made very artificially in the hill, so is it abowt the Theatre in the height of the hill, there was a great building, which surpasse all the other: but the ruins of these buildings are so many, and so call or in perpetuall time, that it would be great charge and loss of time to find them out: but to that in many places of the hill I have seen some parts thereof, for there it make me wonder thereof. It was also, with what reason, that the Romans made such things at Verona (so that, in my opinion, it is the best accomodate place of all Italy) as well for stages as Hills, and also for waters, and specially, the men of that Towne are very familiar and friendly people.
Of Antiquity

Great things, and in divers houses, were made by the famous Romans; but by the
Greeks thereof men can not judge whereunto they served, principally this Building
which was named Leister Zone of Severo; of which Building you see a corner of the
Pavete or standing, which is of 3 cases, all Corinthian work. But it may be seen,
that from the case it was made of another manner of Buildings, because some Pillars were
hollowed and crested; and some starved; besides, the Capitals and other figures are not all
of one work. I have not measured the height of this Building, but partly the ground and
the roof of houses and so as much as I can conceive, the cases about all are more then
another, the fourth part, as Vitruvius writes in his description of Theaters. This Figure
hereunder, between the ground of the Building, is also the like to case of the Paverte o
the Columns: it was measured with the rule that measured the Theater of Pola.
First, the thickness of the Wall, is 2 feet and an halfe: between the Wall and the other,
it is 4 feet and an halfe: between the Wall and the Columns, is 5, feet and 3 quarter
and a half the space between the Columns: the thickness of a Column, is 2 1/4 and
4 quarters.
In this Building there is no Chambers at all, nor any Newe Figures of Stapes, so
going by into the Lodgings: but men may conceave, that it was much greater, and that
in other places both Stapes and Chambers might have stood; and to speak truth, this Building,
when it was whole, was a notable piece of worke, in regard of the great number of
Columns and Pillars that were in it, together with the costly workes thereof.
The ground of the Amphitheater in Pola.

A towne in Dalmatia, this Amphitheater is in the middle of the Town, yet very whole; which building hath nothing but slett walls without, with the 4. counterfeits, which made of 5. pillars, which, I believe, were made for strengthening thereof, because this wall thus alone is: so that nothing at all was made of the building within, but the outermost wall, with the arches marked A. But by the skew of some holes which are within the wall, men may judge, that there they made slettles and sheats of wood, when they made their spoits, and held their feall; nevertheless, for a brimshing of the figures, I have let down the part on paper, as in my opinion, it should be made. This Amphitheater was measured with a moderate scale, which is showed here under the ground: the widens of the arches is 3. feet, 2. ounces, but the principal arches are 1. foot wide, ½ foot the 1st pair of the pillars is 4. feet 2. ounces: the 2nd pillar, in 2. feet and 2. ounces broad: to the pillars on each side, are one foot broad: the pillars in the floor, are 5. feet and 3. ounces: between the pillars of the counterfeits, and the other pillars, is 3. feet and 4. ounces.
Of Antiquities

Outchting the Orthographic, or the ground of the Amphitheatrer of Pole, I have sufficiently spoken: but now I shall show the Orthographic of the part standing up, beginning at the other part; as touching the Balcony, it hath no terminations of measures, (the cause where is,) for that the sill to be seen: so in the sill the Pedestall is not only last, but also the whole first order of the Arches, with all their Cornice upon them, and the sill is the height of the plane of the second storey: therefore I shall set down a height of the measures of the Balconies: but will begin from thence upwards. The height of the Pedestall under the Pillar, is 6 foot and an half: the height of the Pillar, or that Columnse with the Capitol, is about 16 foot: the height of the Arch, is 17 foot and an half; the Architrave is a foot and 9 ounces: the height of the Frase, is 9 ounces: the height the Cornice, is one foot and 10 ounces: the height of the back-tower or place back-high (if there be any other) above the Cornice, is as high as a Cornice; the height of the Pillar is 21 foot and 9 ounces, with the Capitol; the height of the Arch, is 18 foot and one ounce: the thickness of the Arch, is 1 foot and 9 ounces: the Architrave, Frase and Cornice, are of the same height that the underneath is; the Balcony marked X, is 4 feet and 4 ounces. From the Balcony under the Cornice, is 19 foot the height of the Cornice is one foot and an half. And this is touching the Orthographic of the Amphitheatrer, the which Orthographic is on the next side, marked P, and for that (as in the Croupy of Orthographic I have done) the Amphitheatrer hath some Pilasters on some sides, which here were made for strengthening a counterfeiting of the walls: the which wall stood without, without any thing else, and therefore I meant to lie below it now: the figure marked Q, sheweth the sides of this counterfeite: that part marked H, representeth a Pilaster; that part marked A, howeth the Pilaster of a wall of the Amphitheater between the Pilaster H, and the wall of Pilaster marked A, is a going through of three feet and an half wide: so that two men may goe through together. These counterfeites have their ground in every order or story, wherein the people might land; but there are no bayes nor lines of bayes, but were made of wood, as may be seen by some holes by the windows. And that the Comices of this present Building may be the better understood, therefore I have let them here besides, greater figure, that a man may know their members, by their Characters or Letters, which they are marked withal. The manner of this Comice is much different from the Spanish, as men may see; and for my part, would not make such Comices in my books; but with the Author of this Appendix, I would serve my parts, because they are of a better manner of work. I am of opinion, that this was an other workman, different from the other, and it may be that this workman was a high Almaine, because the Comices are made much after the Dutch manner.
Of Antiquity

At Mount Cabello within Rome, where now the stone bases Pavilions and Phidias stand, is the remains of a most stately Palace, whereof one part lay upon the hill, but the part of the going by was made right against the descending of the hill, as commonly in the Phidias hereunder. The Hebraicof this building was measured with a common Ell, to the part whereof Horneth hereunder. And first in the niches of hollow places, marked T. and N. were found the figures of Tiberius and Nubis, which are now set in Belgravia: the place marked A. is a grate to way of 10. Ells bost: the part marked B. is 12. Ells square: the part marked C. is 36. Ells in length, and 18. Ells broad: the place D. is 36. Ells square: the bawls round about are 4. Ells broad: the place E. is of the like measure. The bawls of the same part of Staples is 4. Ells each of them: the places E. are Courts, whereof each of them are 114. Ells long, and in breadth 62. Ells and a half. The Galleries F. are 13. Ells broad: the greatest Staples, to go up to the place of the Palace, are 11. Ells high: that part by the Corners marked K. is 13. Ells on a half broad, and long 15. Ells and a half: the parts H. are Counterfoots to hold up the Staples. The place G. is a Court, which gone light to the place building the two going in marked I. were to go up by the Staples, and the building began where the Staples stand. The great Stately Frontispiece in the middle of the building, was of such breadth, as the middlemost part held without the Course of Galleries. The two Figures, K. and L. which stand without the building, the one (i.e.) the Corner K. in greater and perfect stone, and the other is a Corner of the Court D.
These figures are members of the said Palace:
the part underneath is small.
In this part of the Palace,
this is the way by
men went up to the
plain of the Build-
ing, because it
was upon the
hill: and they
were magnificent and
broad. That part
upon the hill,
where the
Column C
F. is marked,
is the face of the
said building. This
great pillar marked F,
is called Pillar of the
frontispiece, which is a
square 5 but all the rest
are round, for that round pillars are not fit
for corners, this pillar is 700 Elses in the
lowest part, and above it is 2 Elses and 2
third parts: the height, with Base and Cap-
tall, is 39 Elses, and is flatter from the top to the
bottom. The height of the Architrave, is two Elses and
an half: as also the Fraske, which is singly cut, and the
height of the Cornice is 18 Elses and one half part:
and all proportioned according to the greatness. The Fraske
on the lines was an hundred Elses long: the Cornice
with the Frontispice, as much as this Squares contains,
is of one piece of sparley, and the Frontispice rises by in
the middle one half part.
Of Antiquities

Among the ruins of Rome, there are many things found one, which a man cannot make out imagine what they were: a man also finds there many ruins, which are not yet balance and certain points: whereby a man may conjecture the high minutes of the Ancient Romans: among which Antiquities, this hereafter following, is one, as you may perceive by that which yet standeth. This Building is called the Basilica del Foro Transitorio: and a man may imagine the greatest thereof by the height of this Pillar, although part of the ending thereof towards, for the uppermost Cornice is not there in the work, neither is there any piece thereof among the ruins to be found, whereby a man should conceive what stood above such a Building. This Emue was measured with a common modern Gill, which is reduced into 60 minutes: the base thereof standeth between the Loadstiles: this Column has 7 degrees elevated from the earth, of indifferent height: the thickness of the Column marked C, is 3. Ells in Diameter: beneath the Base and in the uppermost part, before the Capital, the Diameter is 2. Ells and 45 minutes: the height of the trunk, 53 Ells, Column, without Base or Capital, is 2.4. Ells and 53 minutes: the height of the Base below, is on Ell and on half: the height of the Capital, is 3. Ells and 26. minutes: the height of the Architrave, to two Ells, and 23. minutes: the Cornice between the Column, and the counter-piller, which Cornice is marked D, is 1. Ell and 48 minutes: the Cornice above (as I have said) is not found there: the counter-column is flat, and is of the same proportion like the round Column, and lessening also above, as the round ratio, the Capital is somede the Capitals of the Pantheon of the Vatican: the Base marked C, is placed there before, in better name, and is proportionate in measure like the greater: likewise, there also you see the Cornice D, in greater name. I have set down as much as the measure of the greater Column C, now well I speak of the lesser, marked B, which Column under it, hath a deep facet Element: the height thereof, is 6. Ells: the thickness of the said Column in Diameter beneath, is one Ell and a third part, and it is lessened above accordingly, as the greatest is: the height thereof both the Base and Capital is 2.3. Ells and 23. minutes: the height of the Base, is half the thickness of the Column beneath, and is lessened like the greater: the height of the Capital is one Ell and half: which Capital is very well made, and the round thereof in great is sign in my other 4. Books, in the beginning of 6 Composita. This Column is fluted, as the figure thereof beneath, and hath also a flat Column of the same figure: the Architrave, Frieze and Cornice above this Column, are about 4. Ells: which Cornice hath the Motules without Dentilles, and is very like the work of the Pantheon, and by as much as I could perceive, this last Column served for ornament of a Gate or Door of the 6th Basilica.

The third part of the common Gill, whereby this is measured.
The third Booke.  

The fourth Chapter.  Fol. 39.
Of Antiquitie

The Romans (because of their great proud mindes) alwrayes sought to build things of great majestie, which might show their great power both by Water and Land: and to that end they made the wonderful Paven of Olim, for the use of the Cite of Rome: which, in truth, (relregard of the commoditie and greatness of the Building thereof, and especially, the great strength thereof) may well bee called wonderful. It is of some Heagonal form, that is, 6 corners: and each Face is 116. roodds long, and each rood is 10 Palmas: by these principal measures, you may understand the greatness thereof. every Face had a large walking place, with Galleries round about, &c. Appertiments also compassed with Galleries, and a walking place in the middle. Along the water side there were trenches of Columns orderly placed, wherin to the ships were fastened, and at the mouth of the Paven, there were towres to defend it from the enemy in time of need. And so that you can hard by perceive the Appertiments in so small a space, therefore I have placed them beneath in greater space, and marked them with A. and B.
The third Booke.

The Chernes of them are lesse then the other, and therefore by the people they were called Threemi minori; neither by any other name. After their opinion they are knowen under the designation of thre Chemes measured with the ancient palmes. First, the Diameter of the round square marked A is about 150 palmes; the part B is in length 80 palmes, and in breadth 31 palmes; the part C is 60 palmes in length, and in breadth 20 palmes. The square D is about 100 palmes in Diameter; and the part E is 50 palmes; the part F is 170 palmes long, and 70 palmes broad; the eight square part marked G is about 100 palmes; the round part H is 150 palmes in Diameter. The part I is 120 palmes, and is almost two square inches. The two parts J, K, and L marked with K is 30 palmes on either side. The part M is 125 palmes, in length, the breadth 30 palmes. The round square marked N is about 120 palmes in Diameter. That part was

The fourth Chapter. Fol. 40.
The preceding, as the place where the water of the Thermes of Titus, the fount of Vespasianus was kept, is wonderfully made, and very Artifciall, and that is, so that the Arches of their pulpituines are placed in such good order, that a man, standing in the going through of the one, seeth them all overthwart: and this is the place which the people commonly call The seven Hallles: and it was for this cause, because the spaces are scarce in number: and in their you see overthwart, backwards and forwards, allways 9, in number: the thicknesse of the wall, is forre foot and an halfe: the thenneresse of the Arches is nine foot: from one Arch to the other, are 27. foot: the breadth of one wall to the other, is 15. feet: and they are round roosted, of an indifferent height. The walls and roostes are plastered with mall hard plaster.
The third Booke.  The fourth Chapter.  Fol. 41.

In Rome and elsewhere there are many Bridges made by the Romans, but I will here shew the intention of some only, that you may see their manner of making of Bridges.

This Bridge is called Ponte S. Angelo, because it standeth upon a pillar, by the Court of Angielsburg: by the ancient Romans, it was called Ponte Olio, or Olo Ioopanus.

This Bridge was wont to be called Ponte Carpelo; others call it Ponte Faber; and in our time it is called Ponte de Tract septi.

This Bridge is called Pontas Sinuins, but commonly it is called Ponte Polio.

This Bridge in former times was called the Bridge of St. Maria, and also Ponte Sisto.
Among other Thermae which are in Rome, I finde this of Antoniano to be the best, and although the Thermae of Dioclesian are better, yet in this there is a closer correspondence and invincible together in every part, than in the others: for that in the place C. they might make all kind of places or spottes without any hinderance. And for that the Thermae were specially made for men to bathe in, as they were not for divers spottes to be made in them, so was the preservation of the water made behind the building, marked A, where, by means of the pipes, they were always filled to term by such degrees.
This ground is measured with the common El, the third part whereof is here underneath, above by the line of the Building. The line in the middle of the place, is 160 Elles, by which you shall almost find all the measure, whereof, for brevity, I will not speak directly, but only of the principal things. First, one of the places for the keeping of the water, is thirty Elles long, and 16 Elles broad. The part X. is 81 Elles long, and the breadth 44 Elles: the round Building D. is in Diameter 56 Elles. The place marked B.C. is 700 Elles long. The part in the middle, marked G. is in length about 150 Elles, and in breadth 60 Elles.
That in the ground before set downe, by reason of the maladie of the figures, which could not be made greater in this booke, a man can not to be know the particular partes, therefore I have in these two sides set downe some partes more plainly, as the ingenious booke man, by the letters where with they are marked, maye and finde them, when he compareth them with the whole ground.
although these figures stand thus without order, and in many places; yet the wise workman shall know, that they are members of the theorem from the word, beholding the letters which stand in them (which comparing with the others) he shall find what parts they are. Also, he must know, that the parts H. and X. belong not to the part F. for the figures hereunder are three general parts, although for necessite sake, they are set one by another. I have also noted downe the particular measures: for the workman shall better help himselfe with the invention, then with the measures.
Of Antiquitie

About fourteen miles from Meare there is a Pyramide, whereof I will show theisme, and also set downe the measure, as I had it from a Gentleman of Venice, who measured the same himselfe, and was both upon it, and within it. This Pyramide was measured by Paces, and every PACE is more than three ancient Palms: the Base, on every side, is 270 Paces, and is right leave square: it is all of hard stone, and you may climb upon it without, (not entilly) but to the top for every PACE is this Palms and a half high: but there are not so many Pyramids, that a man may easily let his foot upon them: the number of the Paces or steps, from the Base to the top, or the highest Pace, is 216, and they are all of one height, so that the height of the whole Pyramide is as much as the Base. Many believe that this Pyramide was a Sepulchre: so that within it, there is a place in the middle, wherein lyeth a great Stone: thereupon men presume, that some great person hath there been buried: but going in, upon the left hand, you find a going up of Stone, which turns about the Pyramide within, through the which you goe by the station, in the top within. About the middle of this Pyramide there is another going in, but it is full dry: on the top of thisPyramide, there is a face flat as playne, about 8 Paces broad on every side, whereby workmen know, that it was the same planke that was made at the founding of the Pyramides. Not farre from thence, there is a head of hard stone, with part of the head all of one Stone, the face whereof is 10 Pace long: and in this Figure there are some Egyptian letters: of this Pyramids and head, Peter Martyr witnesseth, and hath also seen and measured them, which differ not much.
Although the Greeks were the principal founders and inventors of good Architecture (as our Pliny Testimonium, and many other Authors witness) notwithstanding, by reason of their great riches and their land so often overrun and spoileth by the enemies, a man can hardly finde any good house standing whole in all Greece: but as some men have told me, there are yet the remains of a Building, which, as men conceive, was of one hundred Columns, whereof no man can by calling know the height. But (with our Authors licence) so that he makes this by report, and hath no measure thereof, I have only set the fourth part of the ground by the half of the Building (which he hath there placed) whereby the ingenuity may conceaue the whole ground, and the whole figure thereof.
Of Antiquities

Bp. George Bulloke, you may see this building hereunder, which was made by the Bankers and Brewers, in the time of Lucius Secundus Severus and Marcus Aurelius Antoninus: which Building is of Composite order, well set thus on every side with graining. Let no man wonder that the Frate of the Architrave are covered with this table, for that there being much writing to be set into it, the Frate was not great enough to contain so many letters: therefore the workmen made it so, and (as ye) not the order of Architecture at all, having the writing thereon in the corners.

I will set the measure of this Building, for that it was lost after it was measured: but as I remember, the breadth is between 3 and 3 foot 9 inches, the height of the building was 30, and the thickness of the Pilastry, with all the Columns, which are flat, is 4. 1. and a halfe: and so much the Architrave, Frate and Capitice contained.
The third Booke.  The fourth Chapter.Fol.47

The Thynne made by Dioclesian was plastered in manner of walls, to have a great quantity of water, which was brought by pipes a great way off, and it was kept in certain cellares, which had in the Thynne of Dioclesian, as is hereunder set down: it was made with vases, and those it was crooked vases, with vases about them, of very good stone, which was so firm, that at this day it is yet to be seen: the thickness of the vases is of each the four foot: between each two vases is a foot of the old Romane foot, although the large Thynne is measured with Palms: and this line hereunder is half an other foot.
Of Antiquitie

In Rome there are many ancient Triumphant Arches; among the which this Building, by the greatest number, is accounted a Triumphant Arch: yet by the knowledge that men have of it, it is thought to be a Porch, or a Gallery, like unto a Portico or Exchange for a Merchant: it may be it was made by some one nation alone; as yet to this day in great Colonies and Cities, every nation hath a several place, although they are not by that means funded. This Porch or Gallery stood in Neros Bosco, and in ancient time was called the Temple of Mars, which is measured with the ancient palm. This Building hath three gates; as the ground certenueth both these: between the one and the other pillar, there are 22 Palmes round about this Porch; there are 45 niches or hollow places but there are no more than 16 to let images therein; all the rest are but for shows, as being not deep enough cut into the wall; which places were beautified with small pillars somewhat bearing out from the wall, as you see them, and were Corinthia; but now it is spoiled of all such ornaments.

The ground of the figure following.
The third Booke.

The fourth Chapter, Fol. 48

The height of the Arch is 44 palme: the height of the Bases beneath, marked E is 1 palme and an halfe. The Face D. within the corners, is turned into a Comice, and is the like height. The judgement of the workman pleased me well in 6 piece, which is, that he made no Comice in the innermost part, that might trouble the people that should be therein: the height of the other Comices are not measured, but, the fames of them diligently counterfasted, follow hereafter.
The four pieces of Cornices hereunder set down, are the ornaments of the Portico aforesaid. The Base B. and the Frieze D. were measured, and in this form, the great measure set down, but the other were counterfeited by sight, with their heights where they flange and there is little difference between the one and the other, for parts and also in height. The Figure C. is the Frieze and the Figure E. is the first frieze of hollow place.

The Arch Triumphante, next following, is called Titus Arch Triumphante, whereas this Figure hereunder, is the ground, and is measured with the ancient one. The width of the arch is 18. feet and 17. minutes. The thickness of the Column is a foot and 26. minutes and an half. The foundation thereof is measured of 64. minutes, whereas the half is here set down.
I have spoken of the solemnity and thickness, now I will set down the height. And first, the height of the Bow or Arch is as much as one as the breadth. The base of the Pedestal is 2. feet 4. minutes and a half in height. The Canopy of the Pedestal is 35 minutes high. The height of the Bases of the Columns is about one foot: all these parts, and also the Capital of the Column, well proportioned in measure, stand in the beginning of the Compotum Dict. In my fourth Book the flat of the Pedestal is four feet and a half high. The height of the Column without Base and Capital 17. feet and 13 minutes. The height of the Capital is 1. foot and 27. minutes. The height of the Abatements is one foot and 1. minutes. The Frese is one foot and 17. minutes. The Commune is 2. feet and 6. minutes high. The Balement of the Epitaph is of the same with the Frese. The height of the Epitaph is 3. feet and 10. minutes; the breadth is 13. feet; which members shall hereafter be set down and figured here at large.
Of Antiquities

It would be troublesome both to the writer and to the Reader, if I should set down all the parts of the Ornaments, from member to member, as they are diligently described; so that not only both Yours, but also both parts of men's; but I have taken the pains only to set the same down out of the great into the small, and in that sort, that he that is dilettante, may with his Compass find the proportion thereof. It is true, that the Ornaments of the most part of the Triumphal Arches in Rome are much contrary to Vitruvius writing; and this, I think, is the case, that the five Arches are, for the most part, made by the Bests of other buildings, (that is, as many times as they could get,) and it may be, that the whole manner those parts were first built, and more or less upon observation, because they were things serving for Triumphs, and if it may be (as it happened oftentimes) made in haste. That part here on the south fence, marked A, is the Stave of the Bishops; B is the highest Cornice, Stere, and Architectura: which Cornice, in my opinion, is very licentious for divers reasons: The first, it is proportioned to high: from the other Architectura, and abovest, there are too many members, and especially Bottles and Dentils, which standing alike in one Cornice, are bulked by Vitruvius, notwithstanding it is very well goyant, and specially the Stere as bone: but had I such a Cornice to make (observing the right order,) I would make the Stere first, and the Cornice more: I would leave the Bottles as they be, and I would not cut the Dentils, but the Dentils, which are better to make well enough. The two members marked C, are the Face and the Parquet of the Stere, which is the closing down of the Arch. The members marked with E, are, in truth, rich for wonder, but yet so rich, that the one darts to the other: but if the parts were divided, that the one were greater, and the other smaller, I would commend it more. And herein the workman, which made the Pantheon, was very judicious, so that you use no such confusion in his Ornaments. The work under this Arch is very well made and divided; it is also a large Compartment, and rich of work. But it may be, that such as are too much concerned to commend Antiquities of Rome, will (peradventure) think, that I am too bold to censure upon that which hath been made by such skillfull ancient Romans, and in this respect I would have them take my speeches in good part, for that all my intrinsick doth their part, that know it not, and such as will submit themselves to hear my opinion, for it is not sufficient to make ancient things as they stand, but it is another thing with Vitruvius advice to take out the best and best, and to reject the worse. It is true, that the chief part of an Architectura, is, that he himselfe in giving his stones, in many best, in being obdurate in their opinions, make all things as they have seen them, and more by cover their foolishness, without giving any other reasons of things; and there are some that say, Vitruvius doth but a man, and that they also are men sufficient, to make and invent new things, without regarding, that Vitruvius confesseth to have learned it from so many skillfull men, partly in his own time, as also by means of the writing of other best men.
Of Antiquitie

But the Campasogio there is a Triumphall Arch, which by the inscription may be conjectured to be made in the time of Lucius Septimius Severus, and under his name, and by that which men make and sufficiently find, it is made with bases of other buildings: it is also well adorned with good cutting and graving: it is richly wrought both on the sides, and also before and behind: it was measured by the old Roman Palmes of 12. fingers, every finger of 4. minutes, which in total made them 48. minutes. The videntes of the Arch in the middle is 32. Palmes, 15. minutes and a half. The videntes of the arches on the sides is 9. Palmes, 30. minutes. The thickeste of the Arch in the sides is 23. Palmes, 25. minutes. The little Gates within the arches are 7. Palmes and 30. minutes wide. The breadth of the Pilarres with the Columnes is 8. Palmes and 7. minutes. The thickeste of the Columnes is 2. Palmes, 30. minutes. The thickeste of the first Columnes is 28. minutes. This Arch is now under the earth as far as above the Pedestall, (for a high the earth is there raised with the ruins) but there was a part left uncovered to measure it, but they could not come to the Safe to take the measure thereof, because it was troublesome to remove the ruins.

The ground of the Arch Triumphall of Lucius Septimus.
The third Booke.  

The fourth Chapter. Fol. 51

Before I have set downe all the measures of this Arch, touching the Architraphe, that is, the thicknese or breadth, now I will speake of the height. The height of the middlemost Arch, is 4.5 Palmes and 3 minutes. The height of the Arches besides, are 2.5 Palmes. The height of the Pedestall, is about 10 Palmes. The thicknesse of the Columns is 2 Palmes and 30 minutes in Diameter beneath; but above under the Capital, they are 2 Palmes and 15 minutes. The height of them, is 23 Palmes and 24 minutes. The height of the Architrave, is one Palmes and 30 minutes. The height of the Fract, is one Palmes, and 3 minutes. The height of the Cornice, is one Palmes and 14 minutes. The height of the Pilastres, above the Cornice, marked F., is 29 minutes. The Base above the Pilaster, is half a Palm. The uppermost Cornice, is one Palm and 2 minutes, and proportioned in a greater forme.

IMP. CAES. LVCIO SEPTIMO, M. FIL. SEVERO, PIO, PERTINACI AVG.
PATRI PATRIAE PARTHICO ARABICO, ET PARTHICO ADIABENICO
PONTIF. MAX. TRIBVNIC. POTEST. XI. IMP. XI. COS. 3. PRO.
COS. ET. IMP. CAES. M. AURELIO, L. FIL. ANTONINO AVG.
PIL. FELICI TRIBVNIC. POTEST. VI. COS. PROCOS. P. P.
OPTIMI, FORTISSIMI, QVE PRINCIBVS
OB REMPUBLICAM RESTITVVM IMPERIO, POPVLO ROMANO PROP.
PAGATVM INSIGNIBVS VIRTUITIBVS EORVM DOMI FORIS Q. S. P. Q. R.

[Diagram of an arch with labeled parts: A, B, C, D, E, F, G]
Of Antiquities

At the like before, I have set before all the heights and breadths of the Arch triumphant, of Lucius Septimius Severus: now I will find the particular, and several parts thereof, as I said before. There is no measure of the Base of the pedestals, but it may be thought, that they continue as much at the foot, as the Comices of the pedestals, which Comice is a Palms, and so much the Base may hold of which part, the same are here in the middle, marked G. The Base of the Column above thereby marked F, the which Base hath a frame of corner-Bases under the Plinthus: and this may pretenture be done, because the Columnes could not reach to such a height as they should. The Capitell is here not set before, because you shall see the like in the beginning of the Order, called Composita, in my fourth Book: for this is Composita works. The height of the Architrave, is one Palme and 30 minutes: the Fronto is 9 Palmes and 3 minutes: which is so great, that it is full of graving, the length of a small height where it standeth: and by Vitruvius writing, itought to stand the fourth part higher than the Architrave, and this is left. The height of the Comice, is two Palmes and 14 minutes: which in truth is much too high, according to the proportion of the other members; and it behoveth so much the greater, because it hath more pretenture of height: and this makes me specially believe, that this Arch is made of divers pieces of other buildings, because of the standing of the members. The height of the Architrave, Fronto and Comice is marked with D. The height of the Base, above the said Comice, is half a Palme: the height of the last Comice, is one Palme and two minutes, and hath such a great pretenture, and hanging one, as you see in the Figure: and in such place, I blame not the Comice; but affirm that it was made with great judgement: so that the pretenture makes the Comice the greater, because it is (as are from upwaards, and so) that there is like matter, it is not in bane for the building. This Comice here is marked with A. The Comice which beneath by the greatest Arch is marked with C, whereof the Pretenture is much to great: and by my part, in such a subject, I would rather give judgement that it should be high, that with the bearing out, it should not hinder the Light of the Arch. That which marked D, commen right on the Fronto, which goeth from Comice to Comice, as the two little Archs, and this accompanyeth the Comice C. The Comice marked with E, is that which upholdeth the first Arch, the which Comice hath a Sema, which should not make in such a piece thereof: so that all Comices, whose cornices have not their in pretenture, are blamely: so the lowest pair of a Comice is, that the cornice bee of a good height, and of a good pretenture: whereas I set it downe to a common rule, that the cornices that are higher then their Sema, and those at least, that shall have as much Pretenture as height, shall always be commended by men of understanding. This I thought good to set downe, to advertise them thereof that knoweth it not.
Of Antiquities.

In the kingdom of Naples, viz. between Rome and Naples there are many Antiquities; so that the Romans had great pleasure in those places; among the which, this Triumphant Arch is one, being yet whole and safe to look; and therefore I thought it good to let it among the number of the rest of the Archs (which were made by the Romans.)

This Arch is at Benevento, on this side of Naples, and was measured with a moderate ell, whereas the third part is three cubits let down. The figure here below, is the Measuring of the same Arch, and to shew by it how this Arch was made, in a measure, because it may be understood by the writing that standeth therein. The Hubbard of the Arch, is eight Elles: the thickness of the Columns is an Ell: the Pitcher under the Arch, is also as broad the inter-columne holds that Ells: the height of the Arch is almost as much again as the breadth: the height of the Base of the Pedestal, with the under-Bale, is one Ell, ten ounces and five minutes: the flat of the Pedestal, is two Ells, ten ounces and five minutes: the height of his Comice, is nine ounces: the height of the Bales of the Columns, is seven ounces: the height of the Columns, without Bales or Capitals, is nine Ells and six ounces. The thickness of the Columns beneath, is an Ell in Diameter, and above is lettered a flat part: the height of the Capitall, is an Ell, five ounces and an half: the height of the Architrave, is 15 ounces: the Frise is fourteen ounces high: the height of the Comice, is one Ell, thus ounces and an half: the Plinths, which stand as countere-Bale above the Comice, is 19 ounces and a quarter high: the Bale standing upon it, is 11 ounces high: the height of the Epitaph, is four Elles and two ounces: the height of the outermost Comice, is one Ell and three minutes: the height of the impost of the Arch, is half an Ell.

This Ell wherewith the Arch is measured, is divided into 12 ounces, and each ounce into 5 minutes, which comes from 12 ounces to 60 minutes: and this is the third part of the large Ell.
Of Antiquities

The Ornaments of the Arch of Beneventan, which I have seen in the leaves before, are here, according to the measure set down, with the Original. The Base of the Pedestall, and the Cornice thereon, marked F. are, in truth, two pieces of good proportion, and large pieces for Componements. The Base of the Pedestall, together with the Counterbase under it, is one 8l. 10 Dunces and 6 minutes high: the Comice of the said Pedestall is 4 Dunces high: the Base of the Column is 7 Dunces high; and is of Corinthian taste, very well proportioned according to the Column, and underneath there marked with C. I have not set the Capital here: for that men (as I said before) shall find such one in the beginning of the Componata. In my fourth Book, because this Arch is Componata base: The Arch, Frase, and Comice, which stand above this Column, are here marked with C, which pieces are also well proportioned on the remnant of this building: and although that the Comice is somewhat higher than Venus would have it, nevertheless it is well proportion of members, and the same not is not in it that is found in other Componata, which here the statues and the Dentelles standing together: but this workman, being circumstent therein, would not cut the thing in the Dentelles, although he hath set the same there in the Comice, to make such a dánger. The same consideration the workman that made the Pantheion had, in the old Comice above the Chapelles, round about the Temple itself: and therefore I countess a workman, to make such a column, and not to reproach himself upon the doing of licentious and wofull workmen, and erase themselves, saying, Ancient workmen make it, and therefore I may make it as well as they. And although some will argue and say, Why, so many workmen, and in so many places of the world, (not only in Italy) but also in divers other places, have made Comices, with Plumes, and ingrown Dentelles, and that such a column is now turned into a Law, yet I would not observe the same in my books, nor comice others thereunto. The Counterbase, under the Epitaph, about the Comice, marked B. is 18 Dunces and a halfe high: the height of the Basse therupon is 11 Dunces: the height of the Epitaph is 4. Elles 4 Dunces: the height of the Comice is due Elland 3 Dunces. Much commend the Base of this Epitaph. I commend the Basse of this Epitaph, both to little proporction, so to the bigness by under it, but the Comice whereof I will speak, is much too high, according to the proportion of the Epitaph: but were it of less bigness, and the Comice more, and of more proporction, I judge, it would stand better, and I would commend it more: also, if there were not too much crowning surmounting in it, lest the members ought to be humbled, that the one were plague, and the other grand. But there are many workmen, and work at this day, that, to make men take pleasure in their bad workmanship, make too many cuttings in it, that thereby they confound workmanship, and take away the beauty of some from it: and if ever, in times past, that tall and single things, best, were by ill fittall to workmen commended, at this time they are not so. This Figure, marked D. is the Impoll of the Arch, and is well knowne for such a member, the same Comice changeth it felse in a face, which goeth round, as you see, and is halfe an Ell high: and although this Impoll of the Arch is not no Sculpture, yet is it graven where it standeth; but I forgot to draw it so.
Of Antiquitie

By the Amphitheater of Rome, which by the people is called Coliseo, there standeth a very faire Triumphant Arch, which is wonderfull rich of Ornaments, Images, and divers Histories, it was dedicated to Constantine, and is vnitally called, Lacco de Trasill. This saie Arch, although it is now buried a great part within the earth, by means of the ruins, and rising of the earth, is nevertheless of great height, and the Gates and passages through it, are yet higher then two fowre squares. This Arch (as is before sayd) is paling saie to the eye, and wonderfull rich of Ornaments & graving. It is very true, that the Corners are not of the belf manner, although they be execrating richly graven, whereas I will speake hereafter. This ground hereunder, is that the Architomy of the saie Arch Triumphant, and was measured with the old Romish Palme: the breadth of the greater Arch is 24 Palmes and 24 minutes: the breadth of the lesser Arches on the Sides is 11 Palmes, 11 minutes and a halle. The thicknesse of the Pillars are 9 Palmes and 4 minutes: the thicknesse of the Arches in the sides, is 21 Palmes and a halle: thus the place within the Arch is almost four square: the thicknesse of the Pedestals is 3 Palmes and 29 minutes: the thicknesse of the Columns is 2 Palmes and 26 minutes; which Columns are Arched 0:84 followed, by some called channels, and are whole round with their Pillars behind them.

The ground of the Arch Triumphant of the Emperor Constantius.
The third Booke.

The fourth Chapter. Fol. 55

The diameter and obliquity of this Arch, is sufficiently set down, now I will speak of the height the core, and first, the base of the Pedestal, with the Plinth, is one palm and 30 minutes high. The height of the flat, is 7 palms and 5 minutes; the height of the Cornices of the Pedestal's, is 42 minutes; the height of the counter-base, under the base, or the Plinth of the Column, is little and two minutes; the height of the base is 60 minutes: the height of the body of the Column, without base or Capital, is 26 palms and 23 minutes; the height of the Capital, is 2 palms and 35 minutes, and in Composite. The height of the Architecture, is one palm and 41 minutes; but the Pedestal is much less, and yet greater; which, as I have found, at other times is contrary to the doctrine of Vitruvius. The height of the Cornices is a palm and 21 minutes. The height of the counter-base, under the second floor, is 3 palms and 9 minutes; from thence to the highest part of the Cornices, is 21 palms: but the height of that Cornice is 33 minutes. The Pedestals above the same Cornices were not measured, and thirteen float Images, and above the Cornices marked B, were Images placed against the 4 Pillasters, which represented the prisoners with whom he was in triumph. The letters which stand here, are about the Arch, in the place marked A, besides many others, which stand in blurs places of the Arch.

IMP. CAES. FL. CONSTANTINO MAX. P. F. AVGUSTO. S. P. Q. R.
QVOD INSTINCTIV DIVINITATIS MENTIS MAGNITUDINE, CVM EXERCITV SVO TAM DE TYRANNO, QVAM DE OMNI ELVS FACTIONE,
VNO TEMPORE IVSTIS REMPVLICAM VLTVS EST ARMIS, ARCVNI
TRIVMPHIS. INSIGNEM DICAVIT.
Of Antiquities

I have spoken of the proportion of the measures of the Triumphs Arch of the Emperor Constantine: now I will speak of the true all parts and Commaicements, and set their measures together. And first, the Bale marked F. is of the Pedestal of the said Arch; the height whereof, is 3 Palme and 30 minutes. The height of the Plintus under the Bale, is 28 minutes: the rest of the parts are measured by tenths, and proportioned accordingly. The height of the Cninces of the Pedestal, which stand marked under the Bale E. is 42 minutes; and is also proportioned according to the principal. The counter-Bale, under the Bale of the Columns (which I think were placed there accidentally) is heighten the Columns, is 32 minutes high: the whole height of this Bale of the Columns, is 53 minutes: touching the height of the Columns, I spake before, and also of the Capitales, of which Capitals, the same standeth not here, for that the like both stand in my fourth volume, of the Order of Composition: the height of the Architraves, Trusses and Commaicements, is also spoken of before: and this Commaic is very seldom, so that there is no licentiousness in it, which is in some other Bales of this Arch: as it is in the impost of the middlemost Arch, marked C. The which impost is greater and of more members and parts, than the great and principal Commaic, and is altogether confused in members, and that which is most intolerable, the Dentils and Battles are one above the other, and although the Dentils were not there, yet there needed not such a Commaic to bear by an Arch. Herein the architect or the Theater of Marcellus was more circumspect then this: for the imposts of the Arches of the said Theater, are the largest; and best of them for imposts, that ever I saw, and such, as from the which a man may learn, to make the like. The impost of the lesser Arches marked D. is one Palme and 33 minutes and an half: high: which impost would stand much better, if the two flats between the Meta-galls alone, and the Celine under, were turned into playnness only; which then would serve for an Abacos, or also for a column, having the due Proportion. The Bale under the second step marked A. is 16 minutes high: the height of the uppermost Column, is 43 minutes, which height should be to little in so great a distance, if it were not that the great Proportion of Gallery, or overcharging holpe it not; because they are sying owards, from underneath, which otherwise it to be much greater than it is: therefore I much commend this Commaic in this respect. And truly, all the Commaic, whereof the column hath more Proportion than height, and were always better, and may be made thinner at home, so that the members of the building endure less weight: nevertheless, you must not make them of too many licen- cious Proportion: but you shall read hereof in Vitratus, where he treateth of the Order of columns, after the manner of Dones and Pisanian, to be docth (here teach) you clearly enough.
The third Booke.

The fourth Chapter. Fol. 56

This Figure should stand in Folio 52, and the Figure in Folio 53 should stand in this place.
Of Antiquities

Without Apecom on the haurin, there is an upper which extendeth itself a good way into the Sea, which was not made without great cost and charges: it was to defend the Ships from the Renant Sea. Upon the end of the height thereof, standeth an Arch triumphal, all of Marble and Columna made; and there is nothing in it but the Capitals, which are done in very good work: and in truth, this building is so large, and of so good proportion as to make the beholders agree in the true and just value of it. And those that admire it, seeing such monuments, are not only in admiration, but also think it the good workmanship, that hath given so much to the honor of this age and well made buildings; in the ornaments thereof, there is the order of Columna as well observed and kept, as in any other Arch that is to be found; and by reason of the Strength thereof, it is all whole, and only it is furnished of many ornaments. This fair Arch, as it is conceived, Nero Trajanus caused to be built: whereupon, in the highest part of the Arch (as it is said) his Image was erected, sitting on a horseback, seeming to threaten the clouds and people, once whom he had governed, lest they should rebel against; which Image was of Copper excellently well made. There were also between the Columns, above the Comices, certain Images of Copper, as the letters in those places written, do show: there are also tablets of brass, which doth mention, that there were kings of Copper, 97 other such like things hanging in them, which might bee taken from the Cothes, Standards, or other enemies. This building was measured by the ancient foot, the ground to that of Columna hereunder. The breadth of the Arch is ten foote: the thickness of theColumns is nine foot and two minutes; the thickness of the Columna is two foote, 11 minutes: the Intercolumna, or spaces between the Columna, is 7 foote, 5 minutes: the Columna stand without the wall, 1 foot and 11 minutes: the height of the Arch is 25 foot and 1, third part: and this height, although it doth make then two square foote, is not therefore multilapen, when you behold the whole made together: the height of the Pedestals with all their Comices, is 5 foot: the breadth of the Arch is 3 foot, 15 minutes and a half: the height of the Bases of the Columna, together with the Underlayse, are 1 foot and 36 minutes: the height of the Columna to the Capital, is 39 foot, 22 minutes and a half: the thickness of the Columna is 1 foot and 36 minutes: the height of the Capitall is 2 foot, 24 minutes, with the Sarcus, and the Abacus is 10 minutes: the foot of the Columna shall stand in my fourth Disper, in the beginning of the order of Columnas: the height of the Architrave is one foot and 12 minutes: the height of the Frase is one foot and 10 minutes: the height of the Comice is 1 foot and 22 minutes: the height of the Plinthe above the Comice is one foot, 6 minutes and a half: the height of the Sarcus above the two Plinthes, is 39 minutes: the height of the Epitaph below the Comice, is 6 foote and 22 minutes: but the Comice above it was not measured.
The third Book.

The fourth Chapter, Fol. 57

Imp. Caes. Divi Ner. F. Ner. Traiano
Optimo Augusto, Germanico Daco. Pons.
videntissimis Præcipibus.

Quod accessit Italia, hoc estiam addo. Ex Pe.
curnatus, Portuutorem Navigantibus reddideris.
Of Antiquitie

In my opinion, I have said enough of the measure of the Arch of Antonia, yet that the parts of the Comites may be better understood, I will show them here greater; and first, I will set down the lowest parts, as they stand above the ground of the house. The height of the Pedestal, marked G, is said to be of 5 feet, with all the Comites thereto, but the height of the Plinthus of the Base, is 15 minutes; the Base above the Plinthus is 99 minutes, and a third part high; the Cornice of the Pedestal, is 20 minutes, and a third part high; so much both the stone also holds, standing thereby, marked F, which, by my advice, is placed there, to heighten the Cornices, and swelleth not badly, but more, because it is set forth with a list round about it; whereby the Base differeth from the Plinthus; and, so, in my opinion, standeth well. The Base, which is Cistitias, together with the Cornice of the Column, is 43 minutes high; and the Proportion, is 16 minutes and an half in breadth: the thicknesse of the Pedestal is 3 foot; 15 minutes and an half; the thicknesse of the Column, is 2 foot, 11 minutes; and there stand 13, baldorings, or chanels, without the Pilasters; the thicknesse of one chimney, is 7 minutes and a halfe: and the List which parteth them, is 2 minutes and a halfe. The height of the Comites are the thicknesse of the Columns below, without the Abacys; which Comites hath a large space, whereby we may be permitted and believe, that Virtuous doctrine is false, and that Virtuosos understood the height of the Comites without Abacys: (and so this cause) for that the rest part of the Comites that I have named and measureth, are most of such height, and higher, and specially the Cornice that stand in the Nattur; whereas, in the beginning of this Book you may see one. The height of the Architecture above the Column, is one foot and twelve minutes. The height of the Frase, is one foot and eighty minutes. The height of the Comites, is one foot and two and twenty minutes. These are marked together with an A. The Plinthus above the Cynic is one foot, six minutes and an half high. The Base upon it, is thirteen minutes: the space wherein the letters are tojitten, is five feet and two and twenty minutes, and is marked with X. The Impost of the Arch is marked D: the height whereby is 1 foot and fifteen minutes; but the uppermost Cornice, as I have said, was not measureth. The height of the Pedestal, or place of the closing Horn, marked D, above the Arch, is this foot and thirty minutes: and half a foot and 14 minutes without the wall, in the uppermost part; and in the parts below, it comes out a foot. The course tables with the Comites upon them, which stand between the Cornices, are thought to be placed there, so holding up of half Image as the same whereby, neither there marked E, and is there all by the Pedestal on the de, whereas by man may be that they are brought; so they are full of weeds, even to the Cornice. The height of the Comites, standing above them, is 32 minutes; and although I have not showed all the Proportion s heights from part to part, yet have with great diligence reduced them from the great, into a small course; and were (as I said before of the rest) measured with the old Roman foot.
Of Antiquities

The Towne of Pola in Dalmatia, is adorned with many Antiquities: besides the Theater & Amphitheater, whereof I spake before, there are other Buildings, whereof now I will speake. There is an Arch Triumphant, of Columns twelve, rich of ornaments, for Figures, works, and strange devices so that from the Pedestal upwards, there is no space left ungraven, nor only before, but also on the sides, and within, and under in the Arch, wherein are many and divers works, so that it would require long time to declare them particularly: therefore I will name such parts thereof as are necessary for a workman, for Intention and Arte. The ground of the Arch following.

1. The Arch is 12 feet and a halfe in high: the breadth is about 21 feet. The Pilasters in the foreside are 4 foot thick. The thickness of a Column is one foot, 9 ounces and an halfe. The InterColumns is 2 foot, 5 ounces and a halfe. The Pilaster of the Arch is one foot, 2 ounces broad. The height of the plinthus under the Base of the Pedestall, is one foot. The Base is 4 ounces high. The flat of the Pedestall is 3 foot: the Comice 4 ounces. The Plinthus marked D. under the Columns is 4 ounces. The height of the Base with the Plinthus is 10 ounces and one quarter. The height of the Column is 16 foot, one ounce and 2 quarters. The height of the Capital is 2 foot and one ounce. The height of the Architrave is one foot and one ounce. The height of the Frate is one foot and 2 ounces. The height of the Comice is one foot and 10 ounces. The height of the Plinthus above the Comice is one foot and 2 ounces. The height of the Base of the Pedestall, and also of the Plinthus beneath it, is one foot and 2 ounces; but the height of the Base alone is 10 ounces. The height of the flat of the Pedestall is 2 foot and one ounce. The Comice is 6 ounces. The Crown above the Comice, (which Varumus, as I think, calleth Corona nullis) is 5 ounces; and this is the measure of the ground following.

The base common foote.
The third Booke. The fourth Chapter, Fol. 39

The menture of this present Arch is set downe before; in this side following, the particular parts shall be shewne.

These great letters hereunder, haue in the frons, marked Y.

SALVIA POSTVMA SERGI DE SVA PECUNIA.
These under marked, haue in this pedestal, marked X. H. A.

L. SERGIVS C. F. L. SERGIVS L. F. LEPIDVS AED C. SERGIVS C. F.
AED. II. VJR TRÌ. MIL. LEG. XXIX. AED. II. VJR. QVING.

X H A

Y B C D E
Of Antiquities

If the side before I have spoken of the universal measure of the Arch triumphant of Pisa, and have also shewed the figure thereof, and partly set out some of the chief and fairest ornaments of the same: Now I will set out some of the particular measures of the parts thereof: and first, I will begin with another part, as that was placed first above the ground. The height of the Plateau under the base of the Pedestal, is one foot, although that be lower therethrough another of much more height, but it is under the earth: the height of the Columne turned about about, with the Algoramus, is 4 ounces; the flat of the Pedestal, is 2 feet high; the Columne above, it is 4 ounces, for there also is the under-pole, above the Columne: the height of the Line of the Columne, is 10 ounces, and is very well cut and graven: and although the same is Doric, yet the delicate works thereof shew that it is Corinthian: the Columnes are cutted off the stones from the top to the bottom, and there are also many hollowings without the Pedestal, as the figure herethrough doth shew. The height of the Capital with the Abacus, is two feet and one ounce: the which Capital is higher then the thicknesse of the Columne beneath. Nor thetcliffe, it is very well, and heuethly looking to sight, it is also richly wrought, as it is here shewn in the figure thereof: and always, as the Capital of Corinthia is in such proportion as gainst the Columne, I would let it better to the view of beholders, then if with the Abacus it had but the height of the Diameter of the Columne: and although Various writers thus (as is before said) I may his text be satisfied. The height of the Archi, is one foot and one ounce: the height of the Frise, is one foot and two ounces: the height of the Columne is a foot and ten ounces: which Columne is very licentious, although it be rich of wroth, because such richnesse of works confoundeth it: but that which is most uneasely in it, is the Echyn with the Saule above the Echyn, a thing, in truth, much knightly: and that, which is more wrathly laughter, is, that the fab Echyn in the upper part, is cut through, without being covered with any lift, that it might not bee condemned with the lower. But thus hath always been licentious workmen, as there are set in our pages, who, to please the people, make much graving in their workes, without respecting the qualities of the stones, and hallow also in Double workes, which should bee flat and strong, be much graving and cutting, as in Corinthian workes, which, by their folly, affect many ornamentes. But wise and university workmen will always be patience, and if they make work after Dories manner, they will follow good Antiquities: which, for the most part, are in Echyns Precepts. If they make any work after the Corinthian manner, then there cover them with ornament, as that kind of works requireth. This I have set downe, to aduerstice those there that know it not, so they that know it, reade not my advice. Now to come to the purpose againe: Above this Columne there is a Balment, which maketh out those Pedestals, the Plateau under the Base, and which is there set the present of the Columne, (so otherwise, in laying lift, it would darken the Saule) is a foot high, above it standeth the Base, whereby the height is 10 ounces: the flat of the Balment, is 2 feet, the base high: the Columne above, it is half a foot high, which Columne is very kindly, and the parts thereof doth theirseves very well from each other, so that betweene the two corner members there standeth one plaine above: the Columne is that member or part, called Corona, is as underhand Various, whereby the height is 5 ounces. Above these there are some stones that shew to no end at all, but it may be thought, that some things have beene upon them: the height of these stones is 10 ounces: the height of the Impoll of the Arch is 10 ounces, the which Impoll is very licentiously made: and although those 2 members one above the other, are divers, yet they are like each other in proportion: and therefore in the work they stand to no good effect: the other parts you shall know by the Characters in the great Arch.
Of Antiquities

In Verona, there are many triumphal arches, among the rest, there is one Gate, called Casa Vecchio: the which, truly, is of good proportion: this Arch, as men conceive, was in such boldness, and beauty, and also on the site, that two going in, as you may perceive by the ground which is yet there, although I saw it, but was not enow:

This building was made thicker by the same foot, where with the Arch of Pola also had been made. The thickness of this Arch is twelve and on half: the thickness of the Columns, is two foot and two ounces: the inter-columns are four foot and one ounce: the Pallate or Pillar of the Arch, is two foot and two ounces broad. The thickness of the Arch in the first course, is four foot and one half; the thickness of the Tabernacle between the Columns, is two foot and ten ounces and one half: the Tabernacle is ten courses and one half: the height of the Arch of the Columns, is one foot: the height of the body of the Column, without Base of 12 1/2 tallis, is 17 3/4 and three ounces: the height of the Capital, is two foot, four ounces and one half.

The height of the Arch itself, is one foot and one half: the height of the Fréscis is one foot, seven ounces and one half: the height of the Comice is one foot and ten course; and a figure that this figure there is in the Fréscis, and that you see it not in the Arch, nor from the first Comice upwards there is nothing at all in any place, and although the wall is as far continued but you may see there some figure, alter by a man may perceive that the Fréscis is the highest of them all.

The uppermost Comice is not there, and therefore you may not see, according to all Antiquaries, but I have made one, with such measure and form, as my selfs would have made it by rule, so as in my rule, that the uppermost things stand the fourth part there, then the intercolumn, this Comice therefore shall be the fourth part there, that which standeth under it, and is thus liued, that the whole height there be let in four parts and anhalf: the half part shall be for the Archal with the lift, and the fourth part halfe for the Sema. The Praecitate must be like the height, so shall this uppermost Comice be made in manner soffice.

Between the Columns stand four tabernacles, wherein there were images, where of the tabernacle is two foot and ten ounces: the height is fourteen foot, and the arch thereof in the wall, is one foot and ten ounces: the height of the Ballan, is four foot, with the Lute and Sema the little, Pillas on either side, are half a foot: the Archalane is seven, and an half: the Sema is six, and in one foot: the height of the Comice without the Sema is four, and an half: the height of the tabernacle, is four, and an half: the height of the Tabernacle, is three, and an half: above these Tabernacles are four tabernacles with other Comices: the which tabernacles are two foot broad, and one foot in height: but the height of each Comice is one, the height of the Comice of the Arch, although it be one cubit, and the length thereof, 10 1/2 foot and an half: the height is 2 1/4 foot, and an half. The Capital is the Arch, is as broad as broad: the works of this Arch is Composita, and bracey set out with Images of Marble and Copper, as you may perceive in the sides places.

This is the ground of the Arch following.
The third Booke.

This some of the Arch Triumphant of Castel Vecchio in Verona, is made as it is here set downe: and although from the Porches towards, there are no signes of ornaments, yet underneath, it do stand so. And for that the parts hereof are too small that you can hardly understand them, in the next side they shall bee set downe in a greater and plainer forme. This Arch Triumphant (by that which is written within the inner parts thereof) by some is said, that Vitruius caused it to be made, but I believe it not, and that for two reasons so conues. First, that I see not in the Inscription, that it saith, Vitruvius Poliorcet: but it is possible that it was another Vitruvius that caused it to be made. The second reason is this, that Vitruvius Poliorcet, in his writing of Architecture, doth utterly condemn and reiect Stiles and Dentiles, standing together in one Copie, and such a Copie is found in this Arch. And therefore I conclude, that Vitruvius, the great and learned Architect, made it not, but bee it as it will, this Arch hath a good forme and proportion.

These letters are over the Tabernacle in the Peristall.
C. GAVIO. C. F.
STRABONI.

These letters are cut in the inward side of the Arch.
L. VITRUVIVS. L. CERDO
ARCHITECTVS.

These letters are also in the Pedestal of the Tabernacle.
M. GAVIO. C. F.
MACRO.
Of Antiquitie

Because I have not fully written the particular measures of the members of the aboved Arch, neither have I shewed it in such terms that a man may conceive: the particular measures: therefore you may see them here set out in greater terms, and in such last as they are: and first, the height of the Plinthis, under the Base of the Pedestall, marked S. is a foot and three ounces. The height of the Base above upon it, is 6 ounces. The flat of the Pedestall, marked F. is 4 1/2 feet, 3 ounces and an half high. The Cornice upon it is 10 ounces and an half high. The Base of the Column, is one foot high. The Plinthis of this Base turneth into a Corona-like, which we thinkes, is very pleasant: for that I have seen some Graces Pedestals so. The Column is septicated, channelled or hollowed, from the top to the bottom. The height of the Capitall of this Column, is one foot, 4 ounces and a half: but the same is not here, because it is shewed in the beginning of the Order of Composita: which Capitall, in effect, is Composita, although the Arch may be wholly attempted to be Corinthian: and this Capitall standeth in that place, marked C. Also, in the same place you see the Capitall of the implant of the Arch, which is marked with D. But the little Capitall of the Tabernacle betwixt the Columns, is here marked H. And the Cornice also, with the Base marked E. is that which is under the Tabernacle. The Figure C. is the table above the said Tabernacles, and the Figure marked D. is the Architrave, Froste and Cornice, of the Frontispicium of the Tabernacle. The Figure marked with B. is the work which goeth about the Arch: the Cornice marked A. is the principal Cornice about the Arch: which, in effect, is very comely, and well wrought: yet it is vicious, as I have often said: that is, the Plates and the Dentills therein are by Vitruvius described, with many strong reasons. But in this, many men assert, that Vitruvius time, many workmen have made Dentills with Dentills, in most places of Italy, and there round about, so that now there is no question made thereof: but every man hath liberty to make that in his work which he findeth, and both in Antiquities, whereunto I am more, that disproving the same, they have proved their case to be good. But if they will acknowledge Vitruvius for a learned Architect, as most workmen affirm, then (reading Vitruvius with good judgement) they must confess and acknowledge, that they have done amiss therein.

The half of the foot, whereby the Proportion, and the Orthographie, together with the ornaments of this Building, are measured.
The third Booke. The fourth Chapter, Fol. 62
Of Antiquities

In Serona, at the Gate Dei Leoni, there is a Triumphal Arch, with two line goings through, which I never saw in any other place besides, but many with 3 Arches: which building, although it hath the figure of 6 windows, yet go they not through, neither yet very large in the wall: whereby you may judge, that some rare Imagery stode in them. Above the first Comice this building is hollow, in manner of a Rich Closet, but not very large in the wall, but yet with hope of the prospecture, & striking out of the Comice, men might stand there to see some thing 2 or 3 other while the Triumph lasted: but for that concerneth the workman very little, I will speak of the measurements. And first, the opening of the 1. Arch is 11. foot wide, and 18. foot high; the Blocke under the Pedestall, is one foot high; the Base of the Pedestall is 3. Dunces: the height of the Pedestall is 2. foot and one Dunces high: and the Comice is 5. Dunces; the height of the Bases of the Columns is 8. Dunces and a half; the height of the Columns, without Bases 93. Capitals is 12. foot and 3. foot part: their thicknesse is 1. foot, 4. Dunces: the height of the Capital is 1. foot, 8. Dunces: the height of the Architrave is one foot, 5. Dunces: the height of the Friese is one foot, 8. Dunces; and so much is the height of the Comices: from the Comices to the second friese is 3. foot and a half, wherein there are certaine Paties, whereupon Imagery and Store, made fast to the 7. Pilasters, between which, little Windows, beautified with small pillars stand, but not much bearing out: the widenesse of a Window is 2. foot. 2. Dunces: their height is 4. foot, 3. Dunces: the height of the greatest Columns is 5. foot, 4. Dunces, with Bases and Capitalis which are flat, not not much rayled by. The height of the second Architrave is 6. Dunces and a half; the height of the Friese is one foot and a half: the height of the Comice is 10. Dunces and a half; the Corona lies above the same Comice, is 10. Dunces high. The Base of the second Pedestall is one foot; the flat of it itself 3. foot, 7. Dunces and a half high: the Base of the second Comices is 8. Dunces: the height of the Columns is 8. foot, 3. Dunces and a half. The thicknesse of the said Columns is 10. Dunces and a half; the height of the Capital is one foot, one Dunces and a half: the height of the Architrave is one foot and one Dunces; the height of the Friese is 1. foot, 2. Dunces: the height of the Comice is one foot, wherein there standeth some part of the wall, but a man cannot perceive what it might be. This Arch is not very thick, neither beautified on the sides, so that behind this Arch ther is another, standing so near together, that a man can hardly see between them both, as I shall shew hereafter, when I speake of the other figure: the Windows stand not in any good oyer, but somewhat unevenly: for the 2. Windows are not right in Perpendicular upon the Wadire point of the Frontispie, but some part aside, which they set not well: and so that I could not endure such disorder, I have placed them not deep. The Capitals of these Arches are part Composite, and part Corinthian, as hereafter I will declare in Figure.

Dying Reader, Coroneus, a Painter in Urben, hath counterfeited this Arch: the Comice under the Cornus is not there, for he placed there certaine order of figures coting upon the Architrave; the which Architrave, you must understand, is between the 2. Columns once each Arch, and is somewhat flat, because of the writing following.

Over this Arch, on the right hand, these letters following stand.

T. FLAVIVS P. F. NORIVCS, III. VIR. ID. V. F. BAVIA. Q. L.
PRIMA SIBI. ET POLICLITO, SIVE SERVO, SIVE LIBERTO MEO,
ET L. CALPVRVNO VEGETO.
Of Antiquity

Here before, I spoke of the universal measure of the said Arch, and thereto set volume the frame, according to the proportion of the same, but cannot give distinctly the particular parts in so small a frame. Of which members, for that there are divers ornaments in them, I will in this leaf declare them: touching the height and thickness, I will speak no more; for I have done it already: but I will only shew which they are. The Figure marked C, is the said Pedestal, with the Sides, and the beginning of the Column, the which is hollowed: all the members are proportioned according to their greatness. The Capital marked E, having the Architrave upon it, followeth by on the first Column, as the followingetheth. The Figure marked D is the Architrave, Fresce and Cornice together, which stand above the first Column: which Cornice, by the authoritative and example, which is by me in many places alleged, the judicious reader may know, whether they be erroneous or good. The Capital marked F is that, which upholdeth the Arch upon the four square Pillars; these two Capitals are called, Latine busyke, and deep busyke. I will not, as I have said, speak of the measures, so that this Figure is proportioned after the principal, and with great diligence transported from the great into the small.

The half of the common estate, wherewith the storeyed double Arch, with the following ornaments, is measured.
The third Booke. The fourth Chapter. Fol. 64.
Of Antiquity

As I said before, the Arch is very rich of ornaments, and among them, some very rare and perfect; some also very curious, still made and in truth. I have nothing that more likiteth me, then the Cornice marked D, in the other leaf, for the reasons before shown; but all the rest before set before are of good proportion, as well the works as the Cornices. And as the parts of the first story are, so are these following of the second story. The spandrels marked H, are in the beginning of the second story above the Frontispiece; upon which Images (as I have declared) there were images inserted against the lot Pillasters. The lunette marked L, is the name of one of the Chimneys with the Cornice upon it, and therefore null of his measure. That Capital and the Base marked R, is of the same window, shewed in greatest form, that the members may be the better understood. That Base and Capital marked L, is the little Pillar between the Pillasters and the window: and in truth, in these two bases, that is, that of the greatest of the small Pillars agreed with the latter, the architect was very lascivious to accord or agree the one with the other, that the greatest Pillar should have his base Base, and the latter should also have a little Base, according to proportion, which I commend much. The Architrave, Frise and Cornice, marked C. Neither that of the second story, above the small Pillars: this Cornice is very simple, and not confounded with setting. The Pretzel marked B. Neither that of the last story, whereas the Base marked M. Both rest, also the Capital which standeth above, is his companion, and is truly Corinthia, which is confirmed to the principal, for warke and fashion, and in my opinion, very simply. That Architrave, Frise, and Cornice, marked A. Neither the last Cornice: the Architrave is not lascivious, because that hath only two Facies; so is it that, it would, by the farre distance, stand complacently: the Cornice with the Facies, liketh me well, because it hath no Dentiles; and is also well bordered with members: neither is it confounded with much gracefull, but hath a simply Perspective, which prospers by the height thereof a little.

The base of the common foot.
Of Antiquitie

This Arch typemart was made before the Arch of Hadrian, which the table followeth, wherein these Hands of P. Valerius, Q. Cecilius, Q. Servilius, P. Cornelius. It is thought it was set up in the time of Hadrian. This is measured with the same measure that the other is: the breadth of each Arch is 11. foote; the height is 17. foote. The Piliasters of the Arch are one foote, 8. ounces broad; between the 2. Piliasters are 5. foote, 4. ounces: the Parapet, 5. foote, 2. foote. The Canna under the C. in place of an Architrave, is 8. ounces and an half; the height of the front, is one foote, 7. ounces and an halfe; the list above the front is 2. ounces: the Canna under the Dentiles, is 4. ounces and a quarter; and the Canna above it, is one ounce and an halfe. That Astragal is one ounce. The Canna under the cornice, is one foote and a third part: the cornice is 3. ounces and an halfe high, the Canna there is, is 2. ounces and a quarter: the Scim is 3. ounces and half a Soote; but the list is 2. ounces: the Protructure of all, is as much as the height. The Basement above this Canna, is one foote, one ounce and an halfe high: the thickness of the hollowed Columns, is 1. foote, 3. ounces: the height without Capitals, is 9. foote, one ounce and an halfe. The Capital is 1. foote high. This Column hath no Pula no Canne. Carecru, who also counterfeited this Arch, lastly but four places where Histoire are graven, and 5. Columns in this third story: in the second story but 4. windows, and 5. Piliasters: and above them, 5. Columns: the third Cannae you cannot come into.
This figure
B. is the
Architrave,
Fract & Co
me above the
trianos, and
the height of
the first Frac
is 8 ounces,
4 a 3 part.
The
second Face,
is 9. ounces &
an half. The
Remain is the
ounces. The
Prancis lowe
and 4 ounces.
height : breath
of 8 tempctes
is one fourth
the last thereabout
as 3 part of
an ounce.
The other
above
that is 1 ounce
and a 4 part.
The Climatis
under 9 Den-
tis, is ounces
and a 4 part.
The height of
the Denticle is
4 ounces and
4 3 part. The
Canent above
is 1 ounce.
The Aracal
are 3 quarters
of an ounce.
The Climatis above
is 1 ounce
and a quarter.
the height of
Colos is 4,
ounces:The Cim-
eats is 2 ous-
es: the height
of the Cimente is
4 ounces : the
Ris 2. others
are whole.
In short the
Protection of
all, is like the
height whole
height may be
called Deos,
only the gran-
travette but
It was as over
the
Upright
Base.
Many other
things are in
Architrave,
be of 3. will not
heat, because
they are deep
licentious;

Specially the Architravet, called Dr. Burser, because it is barbarous fours.

The third Booke.

The fourth Chapter.
Of Antiquities

Having spoken of many Antiquities, and placed them in Figure, it is requisite that I also shew some of those that were made in these days, and specially, of Bramant's work, although I have not altogether omitted it, having shewed the wonderful work of St. Peter's Church, and other things belonging to holy Temples. And in truth, a man may well say, that he reduced God and perfect Architecture, as reft, by the means of Julio P. M. many large pieces of work were made by him in Rome, so as well; of the which, this letter, is one: this is a Gallery made in Beulard's, in the Popes Court, wherein are two large things to be seen: the one is, the Strength thereof; the which, say that the Pilasters are of so great breadth and thickness, will last, while the world endureth; the other, for that there are so many accompaniments so well set out, with good motion, and excellent proportion: this work is measured with the ancient Palmer. The breadth of the Arch, is 12 Palms: and so much are the Pilasters: the breadth of the Pilasters is divided into 11 parts: one part on either side of the Pilaerre, which beareth the Arch shall have, which is two parts: other two parts shall be given unto one Column, that is 4 parts: 2 parts shall be given to the little Pilasters of the Niches, of hollow leaves, and 3 parts to the stitches themselves: so are the 11 parts distributed. The height of the Pedestals shall be half the breadth of the Pilasters. The height of the Base of the Pedestals, shall have one part of the breadth of 11 parts. The Comite is the 5 part last of the Base. The height of the Columnes, with Bases and Capitals, are of 9 Diameter's, and therewith also the seventh part. The Base is half the thickness of the Columnes. The Capital is of the same thickness, and the seventh part for the Arches. The height of the Architrave, Front and Comite, is as much as the Pedestal without his Base. And this height is divided into 11 parts, four for the Architrave, 3 for the Front, because it is ingrane, and 4 for the Comite, as the half Circle of the Arch is aptone, then the heights of the lights will be double: after that, the impost being drawn in their places, the which are of half a Column thick, and to the niches of leaves, and the quadrants about them, have their certain proportion.
Because I could not (by reason of the smallness of the Figure) perfectly shew the parts of the Gallery also stand, therefore I have shewed them hereunder in greater figure: the part C. is the Pedestall of this Gallery, and upon it the Base of the Columnne handeth, proportioned according to the great: the part B. sheweth the impost of the Arch with a part thereof. The Figures marked A. sheweth the Architrave, Frase C. Columnne above the Columnnes. The general measures toching the height, are already shewn, therefore not to be mentioned againe: for they are proportioned after the great. In this Columnne the workman was very indolent, that he suffereth the Topana to go through intotaken, and suffereth the other parts of the Topana to bear outwards, which is very seemly, and the crowne the stronger, and keepest the whole work from water: with which invention, the workman may help unto it in divers accidents; for the reaching out of Columnnes hand not always well, but in some places well, and in some places ill, and the bearings out intolerable, where the Columnnes on the sides have no Plinthes: of these bearings out, I will say more in the fourth Booke, in the handling of foure manners of Symmetry of Columnnes.
Of Antiquitie

In the laste before, I theveth a piece of worke of Brumans making: and now I tell thevem another of his workes, wherevise a wise workeman may hepe himselfe much, by meanes of the dunders and sundry ornaments that are in it. In this Gallery, the workeman would shew thys of other an abowe another, viz. Dojica, Zonica, and Comumia: and in truthe, thevem were faire, well set out, and placed; notwithstanding, that the pilasters of the first flopp of other being Dojica, were somewhat to weakes, and the arches to wide, to the proportion of the pilasters; and therewith the height of the wall of the Zonica slopp standing upon it, was an excellent that it was broken, vainasted and depeved in short time. But Balbazar of Siccya, a skilful workeman, repaired the broken cornice, making counter pilasters, with under-arches; therefore I have said, wise workemen may learne of this building, not only to imitate large and tall made things, but also to beware of errors, and alwayes to consider what height the several parts slopp is to solaine; therefore I counsell a workeman rather to be timorous, then overbold, so if he be timorous, he will alwayes choose the safest way, and make his worke with consideration, and will his counsell, yea of such as are lesse skillfull then himselfe, of whom sometime men often learnt: but if he be high-minded, and truely to much to his own skill and knowledge, then he will come another mens counsell, whereby oftentimes he deyours and over-shoclyt himselfe, so that oftentimes his worke falleth out badly. Now I will yerve to speake of this Gallery, and set to some some notes of the proportion thereof. The thickness of the Arch shall bee bridded into eight parts, whereof those parts shall bee to the breadth of the Pilasters, and the height of the Arch shall containe 8. of such parts. The sopart of the Pilasters shall bee bridded into four parts, whereof two parts shall bee to the Pilasters of the Arches, and the other two bee to the thickness of the Columnes; the height of the Pilasters shall containe halfe the thickness of the height of the Columnes shall bee eight parts of their thickness, with the Bases and Capitales. The height of the Arches and Frises, and Comunia, is a fourth part of the length of the Columnes. The second flopp shall bee lesse then the first by a fourth part, viz. That from the pavement of the Dojicca flopp, to the higgest of the Comunia, shall bee bridded into 4. parts, and 3. of them shall bee to the whole slopp of the Zonica worke, and so shall all the parts particularly bee lesse in themselves a fourth part. The like also shall bee done with the third flopp, which is Comunia, in regard of the four parts, although it seemeth not here, because the figure is badwre to great: but not to put the reader in a major doubt at the Columnes which stand here in the middle, as desirous to know what they end at the top: you must understan, that you shall finde such invention in the fourth flooke, in the Ouer of Dojica in the forme. II. that although that those Columnes are zonica in the sop flopp, notwithstanding, you may make them Comunia. And that the workeman might the better understand the members and Conunementes of this worke, I have fethed them in greater conrse, and proportioned them according to the principall: I speake of the members of the first flopp: so a man could not easely come to measure the other.
Of Antiquitie

At Belvedere, at the entry of the Popes Court, through the Gallery, which I have set downe before, for the places alturers goth upwards, there is a going up which is very lowe: at the head whereof, you come to a place, which hath the forme of a Theater; the ground whereof is covered under this; and therefore I have set the Profile, that you may understand it. Here I have kept no account of the measures, desiring only to shew the intention of the flayres, and the balle Circle as it standeth. This balle Circle is very much elevated from the Court of the Popes house to the Palace-horizon: and behind the balle Circle, you find a great place with large apertements; at which place, you go through the two Gates, which you sit in the flies of this balle Circle; in which places there are many fair Images, and among the rest Laocoon, Apollo, Tyber, Venus, Cleopatra, and Hercules.
This is the Orthography of the ground prefixed Foilo 69. and as I have said, I will not speak of the matter thereof, but only of the invention: and although that there are either thrice, once one Pillaster, with his Columns, is the best, yet is it not unlike some Galleries, whereas I have spoken before, and that appeared by the double Columns, together with the Stipes of hollow spires, with the Quadroon above them. In Belvedere there are many other things, which I have shown, among other things, there are wonderful blazing spiers, in the ground whereof, there standeth a Fountain, flowing exceedingly with water, the which going up is all full of Columns in the innermost part: which Columns are of four Orders: viz. Dorica, Ionica, Corinthia, and Composita: but that which is most wonderful and ingenious, is that between one and the other Order, there is no difference of distance, but men goe from the Dorica to the Ionica, and from the Ionica to the Corinthia, and from the Corinthia to the Composition, with such cunning, that a man cannot perceive where one Order entirely and goryth into the other: so that I am of opinion, that Bramante never made a faire nor costlier piece of worke therin.
Of Antiquity

Without blame, at Monte Mario, there is a very large place, with all things belonging to a place of pleasure, of which particular parts I will rather refuse to speak, then not to speak them sufficiently; only I will speak of a Gallery, with the Facies thereof, made by an excellent po謦man Raphael, who hath made divers appartments and beginnings to other works, as the Court, though that it is square, yet he had fashioned it round, as the foundation partly doth. That the whole of it marked A. and the two places, B. and C. stand not in such same, but I have placed them there to fill up the ground: for the part C. cedeth in an hill, as also the part E. but in the other side of the Gallery marked F. There is no hole Circle, and that was left out, not to pinch some of the appartments, but to accompany other members by it. The whole of this Gallery is very large; the doors whereof is concordantly alreade: for that the middle part is with a round tribune, and those two on the sides are crosse-wise. In which roof, and also in the balles, Jan van Velden hath made wonderfull great pieces of painted worke: so that regarding the same and excellent workmanship of Architecture, with the beautifying of painting, together with divers ancient Images, this Gallery may well be called, one of the fairest that ever was made. And whereas it is spoken of an hole Circle which bath not answers the rest, neither the workman not willing to leave it unbraced, as furnished, his Disciple Iolo Romanus, in the Facies thereof, painted the great Saint Polisamus, with many statues round about: which worke, Cardinal de Medici, that after was Pope, by the name of Clement, caused to be made. The measure of this Gallery I will not set downe, but the intention shall suffice the workman, so that all things are proportioned according to the best, and hereafter you shall see it made upright, together with the Facies of the Gallery, but the Pictures of hollow scapes on the sides are not there.

By this part following, marked B. A. you may conceive the roofes of the aforesaid Gallery, the large ones whereof confinde much in the corner marked A. (which ginerly to understand also the three others, being well placed) and they well in the drawing of the tribune in the middle, going allways binning with the duplication of pillars, to each Facies of the扁alles: which pillars (in regard the Cosmous remaine whole) make not the Pilasters hollow, but rather each halfe of Pilasters into two pillars, made a large facing upones, and banes (nevertheless) in manner and place of a same pillar: so the Sine of the capy Pilasters follow also. And so that in the figure following in the Pilaster, there is but one pillar with a piece behind, yet to make it better to be understand, is, that each Facies of the扁alles within the Gallery is to be divided into this, of which a man may make two flat pillars, and at the corners one intercolumnie: so that (as it is said) although there are two flat pillars with one Intercolumnie, yet, altogether, it is but one Pillaster.
The third Booke.

The fourth Chapter. Fol. 70
Of Antiquities

Among other Cities of Italy, Naples is called, La Genital, and that not only in respect of the great Barons, Lords, Carles, Dukes, and great numbers of Gentlemen therein, but also, because it is so well furnished with Handsome Houses and Palaces, as any other parts of Italy. And among other pleasant places that are without the City, there is a place called Poggio Reale, which King Alphonse caused to be made for his pleasure, in that time (then most fortunate) when Italy was in peace, and now unfortunate, by reason of the discord therein. This Palace hath a very faire situation, and is well denided for Rooms, so; that in each corner thereof might be lodged a strong company of men; in the middle there are the great Chambers, besides the Rooms under the ground, together with some secret Chambers. The some of this faire building in the ground, as also, the building that standeth upright, is here set downe in the next clause: the measure thereof I set not downe into you, once, because I will newe you the intention: so a workman may imagine what greatness he will have a Chamber, being all of one greatnisse: and then from those Chambers he may imagine all the measures of the rest of the building; which building the Noble King bid to; his pleasure, because men accustomed to dwell in the Country in the Summer time. The Court of this Palace is compassed with double Galleries: and in the milkdell place, marked E. men goe downe a pappe of Stapes into a faire eating place, in which place, the King and his Lords used to banquet and eat at pleasure; in which place he caused certaine secret places to be opened, whereby in the twinkling of an eye, the place was full of water, so that they late all in water: likewise at this kings pleasure, all the water dyed out of the come againe, but there wanted no skites of clothes to put on, noe; yet rich and costly beds for them to lay in, that would rest themselves. So voluptuous Italians, how are you imprentured by your desire! I will not speake of the most beautifull Gardens, filled with all kind of flowers, with divers compartments of the orchards and fruits of all kind of fruits, with great abundance of Fish ponds and Fishe, of places and cages of divers Birds both great and small, of tape Tables, filled with all sorts of Flowers; and of many other tape things, which I will not speake of, for that Marcus Aenonius Michaelis, the Consul of that Towne, very learned in Architecture, hath said it, and hath written of it at large in a Latin Epistle, which pertain to a friend of his. But to come againe to the parts of the said Palace, which is right square, it is within, Galleries round about, one above the other; in the four Corners, within the thickness of the walls, stand the winding Stapes: so goe by into the building. The some Galleries without, marked B. are not there, but for the commoditie and beautifying of the house, they would stand well there.
The third Booke.  

The fourth Chapter, Fol. 71

In this Figure hereunder, I have shew'd the Orthographic both within and without: the part marked A, sheweth the part within; the part marked B, representeth the Galleries within; the part C, sheweth the rooms within. I have not set downe the courting or scope of this house; for, according to my opinion, I would have plac'd such a building, that it might only be used for a walking place, to behold the country about.

The ground of the Poggio Real of Naples.
Of Antiquitie

Considering the large Building of Poggio Real, I have thought good to set down such an other here in this place, but in other houses; appartements, and particular with more ease, for that the places are all of one greatnes, which is not so good a figure: but it is necessary that the first should be greater than the second. In this place I make you no place for lights with it, so that it is a place in the country, being notumberd on the streets: it hath light enough in all the four corners: but some men say, that the Hall with the four Chambers, because they have no light but through the galleries, are darke, so it is no perfect course: to which I answer, that the house being made to be used in the time of great heat, having no place in the middle, the Hall and the Chambers will always be cold, by reason the sunne cannot come into them. These places will be very pleasant at night time, for that the said places have not so great lights as the other dwellings: yet have they so much light as they may: such like may be done in Bolonias, which are made in this manner with Galleries, and daily inhabited. This Building is so disposed, that the corner places being of great thickness, the cell shall be strong enough; yet, although the walls had no great thickness, in regard they are all counterfoots one to the other, yet shall they be of sufficient strength. I will not speak of the measures, for that this being disposed, the skillful workman may imagine (according to his pleasure that raised it to be built) until the greatest of the rooms, then divide it into many cells: other measures, thereby to secure all the rest of the building, as the situation of the place may direct it. Then this building, above all things, shall be placed, that the Sunne may rise upon one of the corners, and to shine upon all the doors thereof: so if it want with one side to the East, and the other to the West, then it will follow, that the South side Hall may enjoy the Sunne-shine upon it, which were not otherwise and wholesome.
The third Booke. The fourth Chapter. Fol. 72

 Marcos, who build in vaines and fancy farts upon the ground aforesaid; but so that this is a place of pleasure, I thought good, for the bannetesse thereof, to make it after the Compliniss manner. I will not trouble myself to speake of the measures nor heights, so in my fourth Booke, in the Dier of Compliniss. O, you shall find a Dressisse, which, together with the judgement of your workman, will serve to let down this measure. And so that in this house there is no shortening at all, whereby you may know the Galleries, the flat and closed places etc., from other, therefore I will let down the two highest sides at each end; you must conceive it to have flat pillars from beneath bywars, that part between both, which is lower, you must suppose both two Galleries, one above the other, the Chambers thereof would be round; the same is to be understood to be both behind, and on both sides. Then may also make above the Galleries a Staircase or Stairment, to defend the rains, the Gallery being made with a Lame, or a Rake, out of the Cuppice of the first floor of the Figures aforesaid: and so also the Hall in the middle, together with the 2. Chambers of the second story, would have more light. For 2. cases I have made the small windows above the great, in the first story. The 1. is, if you will make the windows so low, that a man sitting, may easily see out of them, then (if you would make the windows no higher then the doze) there would bee too much space betwixt the windowes and the rale of the house, which would greatly darken the house, and otherwise the windowes bring much more light into the Hall. The 2. is, that the Chambers by the Hall may not bee so high, but you may make hanging Chambers therein, whereas those windowes will serve. I might speake of many other things, which I referre to the judgement of the workman.
A T last, I was not minded to set this ground, nor yet the building of the 100 Columns, placed in 1., in this place, for that they are things which the Author hath made by reports and hearsay, which I judge not worthy to be set by things that are counterfeited and measured: yet that it should not be said, that I have published this Book laws and imperfect, and not fall as the Author made it, which might have given scandalous and unsome person occasion to inquire and search this Book; therefore I have not entirely let this here, but also added this other Figure following by him let hami at the late R. 2. And now to return to the ground, the Author saith, that in Jerusalem (as it was told him) on a hill, there is a building cut out of a reasonable greatness, in manner hereunder let before: and so that by means of the middle of the middle part, the roof should not fall in; therefore the two Pilasters were left in the middle, and without, two of a middle fast by them, with two little also before, underholding the roofs, which altogether were cut out of the rocks with instruments. In the first entry, are some little Chappells. In the middle there are 18. and behind there stand 2. and a vass locked, which neither men went further; the greatest Chappell is wide the length of a man, whereby you may judge the greatness of the building. This place hath no light, nor can be perceived that it had any light. The Chappells are taken out, as the Figures A. and B.
The third Booke.

The fourth Chapter. Fol. 73

For that our Author before, speaking of an Arch triumphant in Verona, called Dei Barbari, which he termeth to be barbarous and consisted of parts and members, as (according to the history of Vercorius, of good Antiquities) in effect it is: generellese, for that Johannes Caretus (which our Author allegedeth) hath in six volumes so much of Antiquities, in his book of Antiquities, much better, and with more deliberation than all else of the figures by him made (so in length, so red are very grog), Thereupon I thought it good to send it here to the curious Reader, that he may see and also note (by Vercorius rule also), what is good, or ill in it, which may persuade some of this country better than another: because they be to seek for such books in their Architecture. And for a Figure so great in some, therefore I have here set down but the whole, and you must conceive the other side, that is, an Arch the windows and other ornaments, like these of the rest of Verona, where with this building is measured, namely here on the floor as in picture: of which, first, one small window in the pediment, under the great Column, whereby the manner is to be conceived: for the said Caretus states no other manner of all his Figures (but specially of the Figure of the Wonderfull spectacle, as he termeth) both the Theater above it, but above all, with the going up to the hill, where a Temple of Jews, as one Author Hewth afterword in Folio, &c., in this present Book. Of this building, Caretus states, that his are more than all the rest: and so I may satisfy the Reader at once, of that I say, in this Book, therefore I have caused this figure to be printed alone, because it was to great, and (in my opinion) too great, to be printed. Vale.
The end of the third Booke.

Translated out of Italian into Dutch, and out of Dutch into English, at the charges of Robert Peakes and are to be sold at his house neere Holborne Conduit, next to the Sunne Tauerne. 1611.
The fourth Booke.

Rules for Masontry, or Building
with Stone or Brick, made after the five maners
or orders of Building, viz. Thulcena, Dorica,
Ionica, Corinthia and Compofita: and
thereunto are added examples of Antiquities;
which, for the most part, agree
with the instructions of Vitruvius: with
some Figures more added unto them,
which were not in the first, and some
devices of the Author, which are
corrected, and hereunto
annexed.

Translated out of Italian into
Dutch, and out of Dutch
into English.

LONDON

Printed for Robert Peake,
and are to be sold at his shop neere
Holborne conduit, next to the
Sunne Tauerne.

ANNO DOM. 1611.
To the wel-willers of Architecture.

Vitruvius sayth, that such as have built without learning or instruction (although workmen) could never make any more or commendable pieces of work, no more can others, being no workmen, such as have followed the letter or writing alone, and made no proofs, of which, some have presumed to fatter their doings upon Vitruvius; yet in divers places of their writings which are found, they could not close up their rules orderly, but have left many things doubtful, and (more) hereof seemeth that to be good and commendable, which in works is not to be enquired. The cause of this error, is, that the first Book of the said Vitruvius, wherein the Figures are, was left; whereby men might have knowne and found out his meanings; so that hereby it appeareth, that some Antiquities have beene very bare in their works, and especially, in their Orders of Dorica, because Vitruvius nameth no Dorica Bases: but instead thereof, speaketh of an Attica. Now it may be, regarding that there speaketh not of any Order of Attica, therefore they durst not make any Dorica Bases or Columns: on the contrary, others boldly contaminating the darkness of the writer, (or for want of knowledge) have so far exceeded them Authors in many things, that they have not only forsaken and left the examples and reasons of good Antiquities, but also (more than that) have made their works unseemly, and ridiculous to mens eyes, as may be seen in these ancient works, whereby gentle Reader, many workmen, will see in both, have beene cumbered therein, and especially in this our time. Bramant of Caife Durant, Balthazar of Scienne, and many others, for that (not only by means of Julius's Pope, but) also by others, good Architecture was bettered in their times, who after long disputation and searching of many, of well Authors and Commentaries, together with the examples of good antiquities, have with authority (to make an end of all doubts) not only added this Spirit of Attica, of the Dorica, but also as many orders as now are used, beginning at the Tuscan, as the steepest and slenderest of all the rest, and have reduced the same into a certain and common forme, together with their ornaments and measures; which rules: Sebastian Serlius, a workmen and scholar of the said Balthazar, hath written, and set out in figures; so that, leaving the obscurity of Vitruvius, we may make an incorrigible works. And for that all those that have workmanship, understand not the Italian, therefore (in my opinion) I have translated the most certain and best rules out of Italian into Dutch, and out of Dutch into English, only the names of all Pratel, Bases, Capitalis, Cornices, &c. which are not named in Dutch nor English, for that Balthazar, by Vitruvius terme, with the common and modern Italian words, which by some should be as hardly understood as the Latin; But I would commend him, that seeing we take upon to follow Vitruvius writings, that we give him the name of Vitruvius, and the learned might be under flood of the workman, and the workmen also understand of the learned, And for that the workmen might the better read it, I have printed it, in our ordinary Dutch letter. And although this fourth Book of his was forsooth, because it is the best, yet the other all are no lesse fitted and convenient to further Architecture or Art of Building, as in the ensuing Epistle you shall see.
Sebastian Serlius to the Reader.

Owing and friendly Reader, after I had collected certaine rules of Architecture, thinking that not only those of deepe conceit would vnderstand them, but that also each indifferant man of wit might conceave them, as he is more or lesse addicted to such an Art, which rules are divided into foure Books, as hereunder shall be set downe: but for that this Art requireth it, therefore I thought it requisite to begin with this fourth Book, and to set it out, first, which is more to the purpose, and more necessary then the rest, for the knowledge of many sorts of Building and ornaments thereof, to the end that everyone may have some knowledge of this Art, the which is no lesse pleasing to the mind of those workmen that think of such things that are to make, then also to mens eyes when they are made. Which Art, by the wifedome of the famous and excellent spirits that are now in the world, doth flourish in these dayes, as the Latine tongue did in the time of Julius Caesar, and Cicero. Then with glad and joyfull heart receyue at least my good will, (though the effect ensueth not) which, in trueth, I have (to pleasure and satisfie your minds) in this respect.

In the first Book, I will entreat of the beginning of Geometry, and of divers cuttings through of lines, in such fort, that the workman may yeeld reason for that he worketh.

In the second Book, I will shew in Figure, and by reason, as much of Perspective Art, that if the workman will, he may declare his conceyt or purpose, by reasons and figure.

In the third Book, workmen shall see the Ichnographie, that is, the ground; the Orthographie, that is, the raving vp of a Building before. The Scenographie or Scitographie, that is, the light, by shortening of the most part of the Buildings that are in Rome, Italie, &c. diligently measured, and set by them in writing, with the places where they are, and their names.

In the fourth, which is this, I will speake of the matter of Buildings, and of their ornaments, as Thucydides, Doric, Ionica, Corinthia and Compitica, that is to say, mingled. And by these, the whole Art is learned.

In the fift, I will speake of divers kinds of Temples, set downe in divers formes, that is, round, square, square-cornered, eyght-cornered, Oual-wife, and croffe-wife, with their ground, heights and shortenings, diligently measured.

In the sixt, I will speake of all dwellings, which, at this day, may bee vfed, beginning at the meanest hose or cottage, and so from degree to degree, proceeding to the most rich, fayre and princely Palaces, as well in Countrie villages, as in great Cities or Townes.

In the seuenth and last, shall be set downe many accidents, which may happen to workmen in divers places, strange manner of situation, repayring of decayed houes, and how we should helpe our selves with pieces of other buildings, with such things as are to be vfed, and at other times have flood in worke.

Now then, to proceed readily herein, I will begin with the greatest and rustick order of Building, that is, the Thucydidean, being the playne, rudest, and strongest, and of least grace and lessemelifie.
The Author to the Reader.

The ancient builders in times past (as Vitruvius affirmeth) dedicated their towers and buildings to the gods, according to their natures: strength to weakness, so is the term called Doves attributed to the gods, Jupiter, Mars, and valiant Hercules, taking such names from strong men. The same called Ionics, is ascribed to the goddesses: Diana, Apollo and Bacchus, as of the nature of Satrons, that is, of wife, sensible women, which are both tender and strong: so Diana, by her feminine nature is tender, but by being a huntress, she is strong; Apollo, by reason of his beauty, is tender; but being a man, he is strong: like the like of Bacchus. But the Cyprian is taken of mayds, and they ascribe all to the goddess Veils, and her chaste maids: yet at this time I think it good to proceed in another sort, not differing from the ancient authors. By meaning is, to follow the manner and customs of the Chrishians, that I (as far as I may) will give holy Buildings to God and to his Saints, and publick buildings, as well publick as private, I will ascribe to men according to their possessions. So I think, that the Egyptian manner (after my opinion) is best: for strengths, so Gates of Cities, Columns and Cisterns, plates to treasure, mantles and Artillery to have them in; so palaces, houses of the Sos, and such like things, serving for the stores. It is true, that Sculpture and pictures, that is, such buildings as are made of tough stones, and others that are made somewhat smoother, according to the pleasure which the Stone-cutters take therein, are sometimes mixed with Doves; and sometimes with Doves and Corinth. Nevertheless, so that the Egyptian order is the roughest (yet south, force more then the other are, I am of opinion, that the Country Building is more like unto the Chichan, than any of the rest: which you may plainly see to have been observed by the Chichans, as well in their chief Cities and Temples of Florence, as without their Country Villages, into many rich and fair buildings, made after the rusticall manner, as may be seen in all Chichan, mixed with such a slight manner of stone, as the Chichan thought good. Therefore I conclude, that such buildings are more agreeable to Thelian order, then any other. Therefore, altering somewhat from Antiquities, and some others of ours, I will in verses both there of such works, viz. how to make Gates of Cities, Columns, as for Gates; an also in publick and private places, Pavements, Galleries, Windows, Stairs of stones, followed in breed, Bridges, Water-courts, and such like several Diversions, as may happen into a workmen hands to do. And may also (not differing from the ancient rules) make this rusticall manner with the Doves, and also with Ionics and sometimes with Corinth; at the pleasure of those that take to please their own fancies, which a man may sometimes bee more for pleasure then profit: therefore the workman ought to proceed with good advice, especially in publick buildings, wherein certainty is commendable.

In the beginning of this Book, I observed the Comedians order, when (where they intend to play any Comedy) first send out a Prologue, who in few words gives the audience to understand what they intend to retreate of, in their Comedy. So I mean in this Book to retreate of the manner of Buildings, viz. Egyptian, Doves, Ionics, Corinthian and Corinthian, have thought good, that in the beginning thereof, we should see the Figures of all the several kinds hereof that I purpose to retreate of. And although that in the Coloums and their ornamentations, all the masses and postures are not yet done, but only the principal, by general rules, yet will I not so far as occasion shall require, to set them done in particularities; but this is done, as I have, in general rules for an introduction only, the better to understand of every workman, and in the beginning well observe Vitruvius order and terms, marked on the leafs with A. B. C. that every workman may name them according to his country speech. And first, the Story base, or Lionian Pedestall, I mean the flat, without Column or Base, shall be a perfect squaresquare: The perfect Doves shall be as much more as the drawing of a lines from corner to corner, of the perfect foursquare, placing it by right. The Pedestall front, shall be of one foursquare and an half: the Pedestall Corinth, shall be a foursquare and two half parts thereof. The Pedestall Corinth shall be of two perfect foursquares. Also, no wonder not, that the Chapter in ensuing the first, which others would advance the first, so that the first Book thereof contains a Chapter of Geometrie: the second of Perspective, shall be of two Chapters: the third of Antiquities, shall be of one Chapter, which makes four Chapters: so that, this concluded, the next shall be the first.
Fine maner of Buildings.
Of the order and maner of Thufcan workes, and
the Ornaments thereof.

The fift Chapter.

IT Vitruvius, fourth Book and foureth Chapter, we find, that a man should make a Thucan Columne of seven parts
high, with Capitall and Base, which measure should be taken from the thicknesse of the Columne below. The height
of the Bafe or Base, should be the halfe of the thicknesse of the Columne, which shall bee divided into two equal
parts, whereas onefall be the Polumnus, the other divided in three, two parts thereof shall bee the Thorus, the third
the Columne. The Proportion you shall make in this maner: First make a Circle as great as the Columne is thick below,
placing it in a foresquare: without the foresquare draw another Circle, close about the corners of the foresquare,
which shall bee the Proportion. And although all other Bases have their Polumnus foresquare, yet this of Thucan
might be round, as Vitruvius teacheth. The height of the Capitall must bee like the Bafe; that divided into three
parts: one part shall be the Abacus; the other shall be divided in four parts, three for the Echino, the fourth for the
Annumo or Cintho, which may be called, a Girdle, Band, or Lift in English. The third part reeling, (hall bee for the
Hypotrochelum, or Freefe. The Echino with the Cintho, is half the Freefe, but that divided in three, two shall
be for the Round, the third his Lift, the bourn out most bee as the height: and although this Lift is here named with
the Capital, yet it is a part of the Columne, which Columne ought to be made thinner above a fourth part, also the Capitall
in the uppermost part shall not be greater than the Columne below. The manner to desine the Columne is thus: Let
the body of the Columne bee divided in three parts: the third part below shall hang at the leade, and the other two third
parts you shall divide into as many equal parts as you will: then at the third part of the Columne draw halfe a Circle, and
from the lines that hang there, from the outermost corner of the Capitall inwards, measure the eight part, which in all
shall be a fourth part: from under the corner (where the Columne is thickest) you shall draw two lines by a leade, to the
halfe circle, and the parts of the circle outwards, you shall set below, in as many even parts as the two third parts of the
Columne holdeth, which being done on both sides, then there shall bee as many Parallels or Crosses, drawn from the one
point of the halfe circle to the other, each line being marked with number, from the top downwards, and the like upon
the lines that divide the Columne; which numbers being orderly placed, then it is certain, that the first line shall agree
with the thirene part of the Columne above; after, take the second line of the halfe circle, and set it upon the second line
of the Columne, then the third upon the third, and the fourth upon the fourth: when this is done, there must be a tyme
drawne from the Bafe of the halfe circle, to the line 4, and from the line 4, to the line 3, and from the line 3, to the line
2, and from the line 2, to the line 1, also a tyme: and so from the second side of the Columne: and although that the lines
in themselves are right, yet they make a crooked tyme, which the ingenious workmen knowen how to regresse and moderate
at his will on all sides in the gathering of the Ligne. And although this rule is made for the Thucan Columne,
which is lefted about a fourth part, yet it may serve for all sorts of Columnes, and the more the dividing of the Columnes
and the halef circle are in numbers, so much the leaffening will diminish,
A. Abaxos, or tailor.
B. Achinos.
C. Annulus of Cincta.
D. Pipsparatorium or FedEx.
E. Attagalos.
F. Annulus of Cincta.
G. The thickenesse of the Columns above.

H. The thickenesse of the Column below.
I. Cincta.
J. Lopus.
K. Lopus.
L. Plantzas.
M. Proscenius, or bearing out of the base.
N. The thickenesse of the Columns below.
O. The thickenesse of the Columns above.
Of the Thucana

The Column being finished with the Capital and Base, then the Architrave, Fascia and Cornice are to be set thereon. That the Column or Architrave must be as high as the Capital, and the Cornice as high as the last part thereof. That the Architrave must be of the same height. The Cornice also, with her members, must be the like; and the same being divided in four parts, one part shall be for the Cimater, two parts for the Cornice, and the last for the Fascia under the same. The projections of bearing out of them all must be at least as much as their height. But under in the Cornice you may cut channels or hollowings great or small, as the work is, or the pleasure of the workman. But, for that this work is great, and plain of members, a man (in my opinion) may take upon him to add some parts unto it, which may seem to belong unto the same, which must be done when men desire to make the work the better, as you do in this herewith set out. I commend all those occasions that you may profess of bearing out, without their squares; especially, when the spaces are fit to bear it; which projections are both commodious, and beautifie the works: commodious in this, that the walking place upon them will be broader, and it will also keep the works from water; beautifying in this, that when men behold the works with convenient distance from it, it will seem the greater; and where the spaces be wanting, by reason of their smallness, the projection will supply that want, by seeming greater.
Although 'tis before, that the Roman Columns (according to Vitruvius rule) ought to be of such diameters high, with Bases and Capitals, whose proportion is approved good; nevertheless, so that the first Columns (as you have heard in my small Book) were made in the parts, taking the measure from mass set, which is the first part of the same: And also, so that if Columns called Diota, are now of seven parts, the ancient workmen having another part but them, to heighten them, therefore, in my opinion, by the same authority, so that the Roman Column is stronger than the other, I judge, it might be made looser then the Diota; and, by my advice be made but of five parts, with Bases and Capitals, this you may hold for a common rule. And, so that neither Vitruvius, nor any other workman that I have seen, have set downe no rule for the Stilobate or Pedestal, and in Antiquities, as sacred Canon, were by workmen made, as necessarily required; whether it were for raising of Columns, as to a going by with stages, to Galleries, or by any other occasion: Therefore, not being expelled the contrary, I am of opinion, that every workman should to each kind of Column set a convenient and familiar pedestal, as reason requireth, and as the same cause. It is certaine and well knowne, that the pedestal at least must bee foursquare; that is, the body thereof, without base or Cime; therefore the Roman Column being the best of all, the pedestal thereof ought to be a perfect foursquare: the top part thereof ought to be as broad as the plinthus of the base of the Column: the height should bee divided into four parts, one part thereof shall be let under, for the plinthus, and one for the cime, which members shall be burnt: so then, if the Column bee of five parts, the Stilobate or Pedestal shall bee of five parts also in itself, according to the proportion of the Column.
Of the Thucana

I have promised in this Book, only to treat of the ornaments and different manner of Buildings; therefore I will not at this time, how how men should place the Gates of Columns and Piers, with their sides, places to lay out Cannons, with other circumstances of defence, leaving such care to the workmen belonging to warres, according to the situation and accidents of time and place. But I will therein, that when the Gates of the Cities, Townes, Fortresses are placed, how men, in my opinion, should set them forth, setting down some Figures thereof. You must understand, that each Gate or Door is to bee after the Italian manner, and ought, of necessity, to have a Postern Gate, which are called Porte van de cour, which are the small Piers on the sides. But to observe the Symmetry, that is, a due measure, they ought to be made in this manner. The measure of the Gate is thus, as much as the breadth of the light shall be, the half whereof shall serve for the height. The breadth of the light is divided into six partes, whereof one part shall be for the breadth of the Pillars on either side of the Gate: the flat of the Pillars thereof shall be as broad as the third part of the light, and the height, with Capitalest and Scales. The height of the Walls shall be a third part of the breadth of the Pillars, and so much also the Capitales, observing the rule for towns in the first Columnes. That Epistoles, Tepheziums, and Cossena shall be altogether of such height, as the breadth of the Pillars, by the rule above said. Likewise the one Pillar and the other, the Posterns or small Gates shall bee, and the wideness shall bee as broad as the flat Pillars. The height shall bee twice as much as the breadth; the Pillars shall be the third part of the said Posterne. The elevation or raising by above the gate, shall bee at the workmen's will. But the proportion of the Knagges or Frontispiece (which is called with us, the spanning, course, or rafe) I will show in two leys in the order of Daies.
The fourth Booke.

The fift Chapter. Fol. 6

As for that the workmen ought to be copious of intentions, to please himselfe and others, the Gate of the City, Column, or Pinnace, may be set out in this manner, observing this rule: that to broad as the going through of the Gate is, the height shall be as much, and half as much againe, that is, 2 parts in breadth, and 3 parts in height. The pillars shall be the 8 part of the wideness of the Gate: and the Columns and the pillars, being the fourth part of the Gate. But so that the Column is a third part let into the wall, and is bounded with other stones, made so they then bearing, it is to bee made 7 parts high, and also of 8, at the two leafern wall, which will set forth the Gate with more show. The wideness of the Pinnace shall be the half of the middle Gate, the pillars also (as the greater) that is the half. The height thereof should be such as the Facie that beareth the Arch, and it shalbe the Supercrie, or Architrave thereof, as we call it: and if you find not a stone all of on piece fit for it, then you shall make the Cassel or Pinnaces as you see them here in the Figure. And thus the proportion of the Pinnace shall bee, that is, 3 parts in breadth, and 5 of the liue parts in height. The Cassel or Pinnaces of the Arch, shall be 15. In the Bases, Capitals, Architrave, Facie, and Comice, you must observe the rule already set forth in the middle shall be at the two leafern wall, as laid of the other: and all such workes, the greater they be made, and both out, the stronger they are for fortification.
Of the Thucana

Any may make Gates of Tolones and Farts in another manner, both plainer and stronger, following the order heretofore set downe: and the proportion of the twenette of the Gate shall be, as much as the height is under the Facis, which breadth by the route; and from the Facis upwards, as much higher as the hole Circles: yet allowes at the workmen's will to be increased or diminished; and especially, as he is by accident restrained. The two Potes are to be made, as I have before shewed: Their twenette must be the halfe of the middle Gate and so much of the wall shall be left betwixt the great Gate and the two small: which height shall be doubled with the breadth, and the Facis, which upholdeth the Arch, shall also hold by the Canel of the small Gates. Yet must wee take such order, that the Facis having through, should bee the Superellis, which, as I sayd, may be altered at the will of the workmen, without altering them from the Figure.
Dyres kinds of ornaments, many times, put the workman in mind of things which he peradventure would not have thought of: Therefore the figure ensuing will serve the workman to good end in building, as occasion shall serve: as in the wall of a fairestte, where the wall being of a good thicknesse, this work within it would still serve for a place to stand drie in, making the walking place above broader: and easily for defense in time of warre: and for more brevity, it might within be filled by with earth. It might also be the workman's chance to build about an hill: and to set himselfe thereof from the waters, that alwaies with the capte fall from it, to make the earth to sinke. It is therefore necessary for the workman to set the like buildings against such an hill, whereby he shall be assured from such suspicion, and it will also be a great strengthening to the work. The like invention Raphael Durbin bles at Monte Mario, a little above Rome, in the Vineyard of Clement the Seventh, by him begun in the time of the Cardinal Ieronimi Gentæ: and without Pille, for the defence of water against a hill, was made the like.
Of the Thufcana

Ancient workmen, in this kind of rusticall workes, have bled many and severall kinds of Buildings, as you may see hereunder, wherewith a workman may help himselfe in many things, as necessitie requireth: The measure shall be, that the light shall be a perfect four-square, and the wall betwixt them, shall be a fourth part lefe. That Supercilie or Architrave, shall have the fourth part of the light, and shall be made of Pennants which run upon the Center in unequall numbers: and above the Supercilie shall be laid an halfe Circle, divided in nine equal parts, the lines being also distrate upon the Center. The Cunei or Arch-tone being squared, and the three places laid betwixt it, with the Face about it, will in this laste be an exceeding worke. But for that the Cunei of the Architrave must be left, it shall be needfull to fill the halfe Circle with Brickes. And for the more beautifying, you may lay Windows, as the ancients bled to doe, as you may, at this day, as in Rome at S. Columbias and Damien, which, although the shewes be old, yet it is very strong.
As in the beginning I said, the workman may use this Gate in divers places, but not for Fortresses, for the passage through ferres not for Artillerie, or other great preparation for wars: notwithstanding, this part may well serve for the outermost Port of Gate: The proportion shall be, that the light or opening shall be twice so high as the breadth. The Archstones of the half-Circle shall be nine, drawing upon the Center of the Circles. The Face under the Arch shall be the fourth part of the Gates; from the Face downwards to the Pavement, shall bee divided into seven parts and an halfe, and that be five stones broad: these whereby, that be each a part and an halfe, the other three of one part: and thus the seven parts and an half are divided. The height of the middlemost Arch-Stone, as the closing stone, which you will, shall be halfe as broad as the Gate. The Face above the Arch-Stone, must bee as broad as a foot: that is, the thinnest part of the said stone: but the middlemost Arch-Stone, and also the face under, shall be fourth part broad.
Of the Thuscana

The proportion of this Gate, viz. the opening is twice as high as broad: the Pilaster and the Arch are a sixth part of the breadth of the light: the great Pillar shall be once to breadth again, and the height of the breadth. The height of the Base shall be a fourth part, and the Capitol a third part, and so great the Capital or impost under the Arch shall be. The Face in the place of the Architrave shall be as high as the Capitals: the Face also as much, and also the Topiece, following the rule before: the rest may be found with the Compass.
Although the Gate hereunder set downe is much different from the fashion of the rest, yet, for that it is Tuscan makes, and ancient, I thought good to set it here, the which, in former time, was in Rome: En Capo de la milicia Tusiana, although by the decayes thereof, now not to be seen: the two pilles or stones that stand by it on the sides, are out of their places, with which the ingenuous bookman may serve his turne withall, if he place them where they shou'd stand. The proportion of them (by the rule alfo here, may easily be found: touching the gate itselfe, I will set downe no measure, for it is very eafe to be found.
Of the Thuscana

This manner of Gate is covered by the last part of the Circle, and is very strong work, yet the Pennants will not agree with other Buildings of Stone: therefore, if a man will make such work, it would stand well in a wall of Brick. Touching the proposition, I will not speak, for that it is easy with a Compass to find the measure thereof. But the Niches in Lentes, placed by it to fill up the place, the Workman may, at his pleasure, set where he thinketh best, and they may not only serve for Niches, but also for Windows: if they should be used for Niches to place Images therein, it is necessary that the height should exceed the double proportion of the breadth as somewhat more, that they may be more fit and correspondent for Images to stand in, which is always referred to the Workman.
The fourth Booke.  

The fift Chapter. Fol. io

I. S times past, the Romains used to mingle Doricke, Ionica, and sometimes Corinthia, among their rustic buildings; but it is no error, if a man mix one of them in a piece of rude work, showing in the same nature and arts, for that the Columns mixed with rough stones, as also the Architecture and Frase; being corrupted by the Persians, shew the tincts of nature: but the Capitals, and part of the Columns, as also the Comites, with the Frontispice of the Cell, their works of Art. Which mixture, in my concept, is a good sight, and in itself the worth god strength, therefore better for a Foundry then for any other Building: nevertheless, in what place secure the rusticall workes is placed, it will not lose anesse. In such mixture Julius Romans toke more delight, then any other man, as Rome witnesseth the same in fancy places, as also Manus, and without home, the palace Palace called vulgarities El. Te. Which, in truth, is an example in these days, both of good Architecture and painting. The proportion of this gate is to be made thus: the indented must bee of double proportion, that is, twice to bound as high, tac beneath the Arch. The Pillar shall be the seventh part of the indented, and the Columns twice as thick as the Pillar: the height with the capital shall bee eight parts. The Capitals, Frases, Atritane and Comites, shall bee made as is said before: as also, the Frontispice, Frantispice, of the Sculp shall also bee showed in Doricke order. The plane Circle of the Arch, shall bee divided in eleven parts, for the stones of the Arch; but the cloathing stone shall bee greater, the which stone the workman may, at his will, hang somewhat out. The parts which doth uphold the Arch, shall bee halfe the thickness of the Columns: from thence onwards, you shall divide it into nine parts, whereof two parts shall bee for the other part of the Columns, the other eleven divided into equal parts, shall be the stones which bind the Columns, drawing crose once them. And the rudder of this tower is boiled out (pet artificialy) it would, in that case, shew more raunderneisses, especially the stones that bind the Columns and also the Persians.
The fourth Booke. The fifth Chapter. Fol. 11

It is not sufficient that the works should be strong, but it must also be made artificially, to please men's sight. Wherefore this building of stone is not only very strong, but also ingenious and pleasing: with which invention, the workman may turn his hand to many things. The proportion shall be, that the apertures in the breadth, shall be one-third, and the half as much as in height: the half circle is divided into nine parts, and a half, because the middlemost stone is one fourth part broader than the rest. The height of the closing stone, is half the apertures of the light. The flat face of the vaulting, is the first part of the light: from the face downwards are seven parts made: the face above the pensants, half as broad as the closing stone under it, which may be made hanging out underneath the eighth part of his breadth. Touching the binding of the other stones with the pensants, you see it plainly in the figure.
Of the Tuscan

So that pleasure is sometimes turned into beautifying, and sometimes to ornaments surpassing necessity, to those that, according to the wealth of the builder: This invention is made for pleasure, strength and beautie; for pleasure, in regard of the opennesse thereof; strength, so that betwixt both, there is good space of wall, well bound together and so; beautie, because it is rich of ornaments; with which invention a workman may help himself much, in divers things, as I have said. The proportion thereof shall bee, that the closed or mastic vouche shall bee so broad as the opening; which opening shall bee twice so much height. The Pilasters shall bee the right part of the huyderte, and the Columns the fourth part. The inter-Columnes, that is, the widnes between the two Columns, shall be the thickness of one Column. The height of the Columns, with Bases and Capitals, shall bee of eight parts. In the Architectura, Frise, Cornice, Bases and Capitall, the rule aforesaidyn shall be observed. The Pendentts and other bindings are some in the Figure: and although the Columns surpasse the rule two parts; yet, because they stand more together, and are made fall in the twoke, nay so; beautie, that strength, it may passe well enough, by the authorities of my citzen workmen.
This is an excellent thing in a workman to be full of invention, in regard of the diversities of accidents which belong unto building: for sometimes a man shall find scope of Columns, but so low or short, that they serve not for that purpose, so which men would use them wide, only the workman devise some means to help them. Therefore, if the Columns be not so high as it will reach to the Face, that both like fronts of this Gallery, then with these manner of Pennants a man may raise it higher, for not the least it hath good strong foundations: touching the thought above, it will be very chargeable, therefore to make it without binding of iron bars it would not be sure: but it is to be feared, if the Gallery were not so broad, but that it might be covered with Copes that were all of one piece, or else to make strong beams therein. The proportion hereof shall be, that the thickness of the Arches shall be the thickness of 4 Columns, and the height twice as much. The least space between the Columns, shall be of the thickness of 3 Columns, and the height twice as much. The Columns, if they be once-bolted with wrought, should be of the measure before set out, and the rest are clearly to be seen in the Figure: but touching Bases and Capitals, I have said sufficient at the first, in the treatise of the first Column.
Of the Thucana

As this Arch is very strong, considering the conformity of the binding, so also it is ingenious and pleasing to view. Which invention shall not only serve for Galleries of such a like, but for Bridges over Rivers, Conduits to carry water from one hill to another, and to a Continent. The proportion is, that the under-side from one Pillar to another, and also the height, shall be to the Facer that branch the Arch. The Facer shall be the fourteenth part of that thickness of height; from the Facer column, wide to divided into five parts: the half-Circle into nine parts and a quarter; so the closing Facer is the fourth part more than the other; the rest may be found with the Compass.
The fourth Books.  The fift Chapter.  Fol. 13

It may sometimes fall out, that a workman should need many holes in great walls, for the building of his House, whereunto his work belongeth, to carry the bagge for strengthening thereof; and were there not so much need of light, some of them might be filled up with Sticke. The proportion shall be this, that the space of the lights and the middle wall, shall be both of like breadth, and twice so high as broad, although all such things are to be increafed and diminifhed at the workman’s pleasure. The like work is yet to be done in Rome, being not very old made, but such as are in these days made, and stronger. The example whereof is at S. Colin, and Damien,.
Of the Thulcanae

It is said, that fuch pavements are often made, whereby oftentimes that is made, which workmen would not be able to make; if it had not been made before in some other place, and so, at some times, join shall be in a corner or elsewhere, a side of a wall, that shall have neither pane nor windows in it; and yet it is well set off by this rude manner and hasty kind of work: by which invention, a workman may help himself; in which places a workman may set Images, or other relics of Antiquity. Touching the measures and proportion thereof, I will not set it down, for I leave it to the workman to do as he thinks best, as a condition.
The fourth Booke.


Hence the most part of the Supererogities or Artistranes, as we call them, that are set over Gates or other things, by reason of the weakness (if stones be not of a good bigness) many yield to the weight, whereby incline, they break and decay, as you may see in many places. Therefore you shall, although it be in great distance (so that the shoulders on the sides be strong) make such walks of pieces, as hereunder are in divers ways set down: which, with doubt, will be very strong: and the heavier the weight is above, the longer it will last.
Of the Thulcana

Although that in Vitruvius writings there is no mention made in what manner men in ancient times made places in Palaces and common houses to make fire in, yet men find in old buildings some show of Chimneys, to give a way to carry smoke, neither can I find by any workman the truth of any such matters: nevertheless, for that men many years since have used not only to make fires in Palaces and Chambers, for their ease, but are also wont to make door's openings in, and over such places; and for that I intend in this Book to speak of all the Ornaments that a Workman may have cause to be in building, therefore I will shew some forms of Chimneys as fire places, after the Thulcana manner, as Halved and fall in such buildings: the one delicately made without the wall, the other rusticall too, made within the wall.
The fourth Booke.

The first rudical worke was made in this manner, that is, pieces of stone roughly hewn out, but the turning together were proportionable made.

After, they devised the stones in more proportion and their, with flat tiles, and for more beauties, and for ornamentate sake made these crosses in them.

Other workemen brought in wrought Diamonds, and made them decently in this manner.

And in process of time, things altered: workemen for flat Diamonds, set flat tables, and raised them somewhat higher, as in this figure is to be seen.

Some other workemen did more differences and semeluer works, nevertheless, all such works have their original from rudical worke, which is yet commonly called, Workes with poppins of Diamonds.

Here endeth the manner of Elytian worke, and must followeth
the order of Doyien.
The maner of Dorica, and the Ornaments thereof.

The sixt Chapter.

The Ancients (as we have heard) considering the state of their gods, ordained Dorica worke, and dedicated the same to Jupiter, Mars, and Hercules: but we build Temples, and dedicate them to Christ, Paul, Gregory, and such holy personages, that were not only professed Souldiers, but also valiantly and boldly lost their lives, and shed their blood for the faith of CHRIST. All such belong to Dorica, and not to their gods onely, but to men of armes, and strong personages, being of qualitie more or lesse: for whom, if a workeman make or build houses or palaces, they must be Dorica: and the nobler the man is for whom such worke is done, the stronger and fatterelye they ought to bee; and the more effeminate that they are, the more flenderer and pleasanter the building shall be, as I will shew when time serueth. But now we will come to the maner of the worke. Vitruvius speaketh of this Dorica worke, in his fourth Booke and third Chapter: but touching Bases of Columnes, hee speaketh thereof in his third Booke, although some are of opinion, that he speaketh & meaneath of the Bases of Corinthia, for that they have bene much vied on the Corinthia Columnes, and Ionica. And some alfo think, that Dorica Columnes had no Bases, having respect to many ancient buildings; as the Theatre of Marcellus, one of the fayreft worke in Italy, being the middle downewards Dorica: which Columnes had no Bases, the body of the Columnes refiting upon a step, without any other support. There is at Carcer Trotile the Signes of a Dorical Temple, the Columnes whereof are without Bases. You may alfo fee in Verona an Arch triumphant, of Dorica worke, where the Columnes are without Bases. Neuerthelesse, for that workemen have in former times made the Corinthia Bases in another maner, as I will shew hereafter: Therefore I affirme, that these Bases Anticurga, which Vitruvius, in his third Booke, doth name, are the Dorica Bases: and this wee see, Bramant hath obferved in his Buildings, which he made in Rome: which Bramant, being the Light and Inventor of good and true Architecture, which from Antiquitie to his time (being under Pope Julius the second) had bene hidden, we ought to beleue. Then this Base of Dorica shall be the height of halfe the thickneffe of a Column: the Plinthus the third part of his height: of the rest there shalbe foure parts made: one shall be for the Thorus above: the other three shall be in 3 equal parts: the one for the Thorus, the second for the Trechile or Scotia: but the same being devided in euene parts, one part shall be the uppermost lift, and another the undermoft. The Proiecture or bearing out of the Base, shall bee of halfe the height, and so shall the Plinthus of each Facie hold a thickneffe and a halfe of the Column. And if the Base flancketh below our light, the corner vnder the uppermost Thorus, (being of it fette darkened) ought to bee somewhat lower then the other. But if the Base flancketh above our light, the corner above the undermoft Thorus (also of it fette darkened) shall be greater then the other. There to also the Scotia, darkened by the Thorus, in such cases halbe made more then the measure appoynted. And in such cases the workeman must be judicious and wary, as Vitruvius would have him to bee learned in the Mathematicall science, that doth study his Booke.
As for that Vicius hath divided this order of Doxica by models, making the Column of two models in thickness, and the height with Capitale and Bases of 14. Models; so then, the height of the Base is a Model; the body of the Column is 12. models; and the Capitall one model, which is 14. models in all: The height of the Capitol shall be divided in 3. parts, whereof one shall be for the Plinthis, or Abacus, wherein also the Cimatic is to be understood: the second, the Echius with the Annulo the third, the Hypotrichia or Frese, which Hypotrichia shall bee in thickness the last part lette then the Column below. The breadth of the Capitol in the uppermost part shall be in each Part 2. Models, and a feet part: and this is according to Viciusus impressing. Although I am of opinion, that this place is satisfied touching the Proportion, which in effect is very lame, in respect of that we see in Antiquities; therefore, after this Capitol, I will make another after my fantastical, with the particular measures thereof better described, so that Viciusus doth it too briefly.

The Capitol being divided into 3. parts, as I said before, I say also, that the Plinthis or Abacus should also be divided in 3. parts, one part for the Cimatic with her Rule, Lilt, or Fillet: but the same thickness divided in 3. shall be the Lilt, and the other two the Cimatic. The Echius shall also be divided in 3. parts, and 2. third parts being for the Echius, and the rem for the Annulo, which shall also be divided in 3. parts, givning each of them one. The Frese shall be as the other. The Proportion of each part shall be like the height: and so being, it shall be made by more certaine rules, better, and more easily for them.
Of the Dorica.

Upon the Capitol you place the Epistila: Architecture, the height whereof shall be one Poddell, and divided in 7 parts, one shall be the Tenna or Litt: the Gates or small Littes under the Tenna (which Vitruvius named Sub tenna) are in all, the first part of a modell: which height being divided into 4 parts, the 3: parts shall bee the Gates, and the other the Litt. The Gates shall bee five in number, hanging under the Triglyphes. The height of the Triglyphes or Trigliph shall bee one Poddell and an half, and the breadth one Poddell: which breadth divided in 12, on either side there shall be on e left for the half Channels or hollowings, and at the 10, parts reeling, 6. shall bee for the flat of the Triglyphes, and 4. for the Channels or hollowings in the middle. And from the one Triglyph to the other, there shall be the space of a Poddell and a half: which space shall bee right 4. square (by Vitruvius named, Spatha.) In which spaces, as you please, you may set, cut, or grave, Or embe, with Dishes; and that, not without secret signification. For in ancient time, when the unbelasting folks sacrificed Orm, they alitised Dishes, 8 platers thereunto, placing such things round about their Temples for ornaments. Upon the Triglyphes, you must place their Capitall: the height whereof shall bee one of a Poddell. Above the Triglyphes or their Capitalls, the Corona must bee placed with 2. Chimneys, the one above, the other below: and they both together divided into 5. parts: 3. for the Corona, and two for the Chimneys. But the height of them all, halfe of halfe a Poddell: upon the Corona, you must place the Scima; the height whereof is halfe a Poddell, and to it you must adde one eight part for the Litt thereof above. The Proportion of the Corona shall bee of 3. parts: two bee in one Poddell: in the ground of the Corona, right above the Triglyphes, the Gates were orderly set, as you see them in the Figure hanging beside. Also, betwixt the Triglyphes are cut Fulmines, that is, winged lightning: so you may leave the spaces bare. The Proportion of bearing out of the Scima must be like the height thereof: even so, each part of the bearing out of the Corona shall have their Proportions like their height. But the more Proportion the Corona hath, if the stone may bear it, the more substantial it sheweth. This, too, is, that the ancient Romans did observe, as shall bee shewed in open time severally, both in Figure and measure.
If you will strike at channel the Columns you must make 30 in number, in manner hollowed, and from the one side to the other in the places of the stones there must a straight line be drawn, which shall be the side of one square, which 4 squares being made, placing the one stone of the Column in the Centre, and with the other finishing both the one and the other side of the line, making it about, it will make the right hollowing, which shall be the fourth part of a Circle, as it is hereunder showed. And if, for the casting up of Columns, or to other occasions, it were necessary to make the Stilebottom or Pedestall being not high enough, to be made higher, then the flat of the Stilebottom shall be like the Plinth of the Base of the Column, and the height, that is, the even of flat made thus: of the breadth shall be made a perfect square, and from the one corner to the other, there drawn for Diagonius, and the length of the Diagonius shall be the height of the flat, as you may see it here below, which being divided into 5 parts, there shall one part let alone for the Cliniate, with that belongeth thereunto, and one other part shall be given to the Base, and to this Pedestall shall be of 7 parts, as the Column is. And although this Proposition of the Capital is contrary to Vitruvius rule, because it is perpendicular with the Plinth of the Base, yet so that I have seen the like in some Antiquities, and have also placed some of the like last in pieces of work, I thought it not amiss to set this here, for the like of those, that will make it like, although some of Vitruvius Professors, not having seen the like in any Antiquities, will contradict it: but if they make the Abacus of the Columnus, whose Proposition also hangeth on the Plinthus of the Base, they will not so hastily reject this Proposition.
Of the Doric.

Of that I find great difference between the writings of Victors, and the things of Rome, and other places of Italy: therefore I have here set some, which are yet extant in work to describe: which, although they be of small steps, without numbers of measures, yet they are disposed according to the great, and with great diligence reduced into small steps.

The Capitol P. was found without Rome upon a Bridge, standing one T. above that Capitol V. is in Verona, in an Arch triumphant. That Capitol T. is in Rome, in a Doric Temple called the Arch Julian, that Capitol P. was found in Perseus, with others other considerable Antiquities: the building and parts, although it be great, yet it is very well to the eye. The Balance, or Balance, and Capitol A. are at Rome in Aloro Boario. The Comice, Capitol, and Impollia of an Arch marked B. are in the Theater of Marcellus. The Comice, Raze, and Architrave, are also in Rome, in Aloro Boario: which I hope the best that workmen may do, that which likeliest them best. Hereafter I will set before some particular measures necessary for the workmen.
Of the Dorica

The parts of the Doric order are as follows, and are necessary, I will take

pieces to declare so well as I can. First, although Vitruvius affirmeth, that the Doric order should be divided into 27 parts; yet I find not, that the parts map be

so, for this cause, that giving the middlewell: the base, the middlewell: the base, and the other spaces 3, the same number will not make the whole: but, as I conceive, if you set 42, as you may see and reckon in this figure following, as also in the book Thesaurus of 4. Columns, the middlewell of the whole base should be divided into 23 parts, which, if you do, you cannot handle, if you will give the middle well: the base, and the other two sides of them 3. But, by my advice, there should be 27, as you may see in the figure following. Then, if the principal of the Columnes be divided into 27 parts, the Columnes shall be 2. Columnes that is, the middlewell: the base, that is, of 4. Columns, and the middlewell: the base, shall each of 3. Columnes and an half, that is, two and a quarter, and a quarter and half: and do shall the 27, be divided. And above each Columnes the Triglyph being set, 8, the Triglyphes divided with Periaphyes, according to the rule above.

Thus, the middlewell: the base, shall have 4. Periaphyes, and those on the doors shall have 3. The height of the Column, Capital, and Architrave, shall be also made according to the rule, but the height of the Fastigium of 27, shall be the ninth part of the length of the Cimatie, that is, about the Cyma, setting the measures under the A. upwards to the undertome Cimatie of the Colona B. The Scroateria 27, Periaphyes A. upon the Fastigium shall be 3 half the height of the Fastigium 27, Cyma, that is, of the same half, which Vitruvius calleth Capital, and they shall be as broad as the Column is above, and the middlewell shall be an 8. part higher than the other. And so, like this Divo 27, Cyma is of Dorica, and is hard to be understood, therefore I will then in the next part I can, both in writing and figure. Vitruvius saith, that from the Panement to the Lintema, that is, from the ground of the Gallery, to the edge of the same under A. must be divided into three parts and an half, and these parts shall be the height of the light on either side, in my opinion. But so that a man cannot so well in a small figure explain all the particular measures, I will make it more greater and perfecter in the next leaf.
The fourth Booke. The sixt Chapter. Fol. 19

Tympan. A
Of the Dorica

Having made (as is before said) these parts and an half from below upwards, 2. parts shall be for the height of the light, which height being divided in 12. one part shall be the breadth of the Antipodium or Pilaster, and the light shall be 5. parts and an half broad: but if the light under be of 10. feet, the Pilaster shall be letted a 3. part in the uppermost part: and the same Pilaster shall also be made thinner a 4. part above. That Superficies or Architecture shall be of the same height, in which the Cimature Librum with the Altaragall is to be made: which Cimature shall be the 16. part of the Superficies, I meaneth the Alcagalous Librum, as it is fixed in the Figure A. It seemeth, that the Author meaneth only the Cimature above the Superficies, but as it is same in some Antiquities, therefore it is to be made, in regard of the Antipodium. Upon the Superficies, instead of a Figure, you shall set the Superficies as high; in which, the text saith, men cut the Cimature Dozim, and that Alcagalous Librum in the Sigma Sculptura, which is confused. But here I let my selfe to understand, that the meaning of the Author is broken, where he saith, Sigma Sculptura; he would have said, Sigma Sculptura, that is, without cutting or graving; and that is, Cimature Dozim, together, with the Alcagalous Librum: the proportion whereof standeth in the Figure marked A. D. So that, that the tolerable, that the Cimature of the Censor shall be of like height of the uppermost of the Capitolis, which being so, then the Censor will be very great, to which (according to the Authors meaning) I have given as much Proportion as the height of the Superficies is. Although such Censors will never be handsome so cunningly in toposche, nevertheless, to treat of the Ornaments, I thought good to let bothe my opinion herein, and to show it in Figure.

Corrections of the aforesaid text, by d. Serle.

I have printed Vitruvius writing nerrer, and with more deliberation, where he speaketh of the Cimature Dozim, and the Alcagalous Librum, in the Sigma Sculptura: and I find, that Sigma Sculptura is meant of flat cutting, rising very little; now, so that I have found many like it in Antiquities, viz. where the Alcagalis, Lataxes, and Epigies, are made but small, or little Proportions or rising up, therefore I let this for imitation of Vitruvius, to be corrected touching Dozes.

And so that our Author hath set this correction of the Cimature and Alcagall here, wherein, in my opinion, there consisted so great matter, I think it not amiss to make him a little in this matter touching dores, wherein confessedly much. For where Vitruvius saith, that you must divide the part from the Pinnament to the Lateralur in 3. parts and an half, it must be understood, above towards the Cimature marked B. and then the doze would be well, and the Censor would be like the Plantons of the Capitolis. Now, so that the text is so different in other places, as in the middle of the Papels, whereof Castalianus saith, that he hath found 3. or 4. foote, so it is to be feared, that this also is not well understood. Thence much have (but your licence) thought good to insert here, that the building should not be left imperfect, as our Authors. For, although he let downe the Figures of more dozes, yet he sheweth not how they shall stand in the Building aforesaid.
Of the Dorica

For that men in our time doe not set the Dorica 3terned about, as they did in ancient time; which I, for some reason, doe not discommend, yet some skillfull workman have many, which was part of common workmen like not. If then the workman will make a Thrasimemum or Doric simply, with little beautifying, after the Doric order, then he may observe this order and measure hereafter following, whereas the light in that which is open, shall be twice as high as broad. The Antipagamentum or Pillar shall be the first part of the breadth of the light, without the Antipagamentum you must make an Echino with two Lintles, which shall be the first part of the Pillarers or Antipagamentum, although in the Case, spoken of before, it is the first part: nevertheless, so that I have been in instructions, in a meane Cate of 12 parts, I have done it here also, as I promised: you must not make the Echinos of the 4. part of the Circle, but it must be slatier and lower, which Vircius called, Cimactium Lesbium. The rest of the Pillar shall be divided into 9 parts, whereas 5. shall be for the greatest Face, and 4. for the lesser Face. About the Antipagamentum, that is, the Superclium, the Cornice shall be set of the same height that the Superclium is, and shall be divided in 3. even parts: the first, for the Cimactium with the Metragal: the second, for the Cornice, with her Cimatis: and the third, for the Scima: But there is also the eighth part added the same, and the Projecture being part of shotting over, shall be according to the rule alfo, set downe in the beginning of this Book.
The fourth Booke, The sixt Chapter, Fol. 21.

A. Crest false.
B. Letter false.
C. Altezall.
Of the Dorica

Although that in the Order of Dorica Vitruvius makes mention of one Doric Gate only, and barely enough (in my opinion) as I showed before, I think it requisite, that men shall not only be one sort of Doric Gates, but also of divers friezes and fashions, to beautify a piece of work, and to please divers minds: Therefore, when a man will make a handsome Gate, he may follow this figure: that is, to set the breadth of the Door twice in the height, and the Pilaster must be made of an eighth part of the light, and the Columns of the third part of the breadth, which shall be nine times in the height: and although it be more than the measure set down, yet it is not half, because some part is made up in the wall: so some Antiquities use it, which in such cases are not corrections. Upon the Columns you must set the Architrave as high as the Pilasters of Superficile. The frieze shall be five parts of the thickness of the Columns, upon every Column there shall be Triglyphs set, and from the one Triglyph to the other, there shall be three Triglyphs and one space between. The other particular members, as Base, Capital, Frieze, Triglyph and Comice, follow the rules aforesaid. Now, for that some Fatigies, Frontispicies, Courtings and Seniles, are higher than Vitruvius sets them above, their common rule being, that you divide the Comice from one corner to the other, as from A. to B. in 2. parts, and the half shall hang downwards, straight by the Lead to C. and then the one part of the Compass set upon the C. and the other part of the Compass on the corner A. wherein it about to the corner of the Comice B. that upper part of the Circular line, shall be the one half of the Sagittum of Swell.

The fourth part of the Circle.
A. Superstitie.
B. Curtilis et Arcitane.
C. Zeppelin et Trile.
Of the Dorica

A Description of the Dorica is better and more elegant, as it gives some sound in her own nature; therefore it is the more pleasing, when you see a wise is made of times, members and parts, although in the nature of it, as you may perceive in the figure following, wherein there are Triglyphs and Scutules, all in one order; which, in effect, you never saw in any Antiquities or paintings. But Balthazar of Siena, one that read and wrote out all Antiquities, map, or Adventure, have some sense; at least himselfe was the Inventor thereof, placing Triglyphs above the Dorje, where they bear least stresse, and the Scutules above the same part of the Pilasters, which bear all the weight of the Façade, and in my conceit, namely, and was much commended by Clement the seventh, who, assuredly, was a man excellently come in all Artes. This part shall have the light double proportioned; but the Pilaster shall be the 7th part of the height, and the Scutules the base thereof. The breadth of the Triglyphs and Scutules, is the half of the Supercilies, and the height a double breadth, making 2 Scutules over one Pilaster, and 4 Triglyphs over the Dorje: the spaces shall be all 4. square. Above the Scutules and Triglyphs, you must see the Capitall of Abacæ: the height of the scutelle thereof, shall be a 4. part less than the breadth of the Triglyph, and the Cymatle the 3. part of the Abacæ: The height of the column with her Cymatle, shall be as broad as the Triglyph is, and the Scutules also by much the breadth of the Column before, shall be as much as the space from one Abacæ to another, but in the grounds there may be perfect four squares: But the Protrite or over-bearing both on the right hand and on the left, shall be as great as before. The Protrite of the Scutum and the Cymatle, shall be each according to their height. That Façade is the highest part, shall be a slit part of the scutelle, from the one corner of the Scutum in the right line, in the other.
Of the Dorica

Although a man may make divers kinds of Gates in Do Rica wise, yet for that at this day men court after novelties, especially, when they are made by rule and reason, although the Columnne, Frase and other members are mixed with rusticall Building, yet herein you may see forms and fashion: and whereas I here said, that a man should use rusticall and bozith works in Foxts and Freserles, now this may serve for a change, but not without, for receiving of hot in them, &c. The light thereof is also double in height: the Columnnes two tunes so high as the Pilasters, being 14. Footes high, with Capitalls, Englishe, Falsium, &c. Let the Reader see his pleasure further herein, for me thinkes there consisteth little heriting, and there is enough said as before.
The fourth Booke.  The sixt Chapter.  Fol. 24.

My meaning was, in the beginning of this booke, to speake most of the ornaments of the five orders of buildings, as of Cylumnes, Pedestals, Epitlliiums, Doric, Ionic, Corinthian, and Windows, Niches, & such like things. But, after that I determined to augment and enrich this column, in painting divers facies of several parts of Edifices, Temples, palaces and houses, &c. And so that, when as the column standeth upon the ground, they are commendable; yet oftentimes it failed out, that men have not their columns thicke enough, nor long enough, as they before; so that it is necessary to place pedestals under them: therefore I have made this other following: the proportion whereof shall be as followeth: that the inturness shall be double in the height: the pilaster with the arch, halfe a 12. part of the inturness; the column as thicke againe: the inter-columne halfe the inturness of the light of Doves: the inturness of the niches; 2. Columns thicke, and 4. in height: the Pedestals, 4. Columns thicke in height; his breadth, and the rest is as before said. The Cylumnes, with the base and Capitall, shallbe 9. parts high; the Epitllium is halfe a column thicke; the Triglyph of the same breadth, and twice 1/2 high with the Capitall. The Triglyphes placed as you ley them, the Copora and the rest of the members shall be made as is before before. The height of these Columnes somewhat exceed Vitruuis writings; but I have set such an other, somewhat higher, in Antiquities, being made of the first part of the Column in length. The Acrotelia shallbe of height and breadth like the Column above, without Copora; and the middle-most a set part higher, as also the Column a 9. part, being made full in the wall.

A. A. A.

Acrotelia.
Of the Dorica

This Figure following, may be bid by the learned workman for divers things, and may bee altered according to the accidents that shall happen: it will also serve for a painter to beautify an Alter withall, as men at this day bee in Italy: it may also serve for an Arch triumphant, if you take away the Basilment in the middle. Likewise, you may beautifie a Gate initial, placing out the figures on the sides: sometimes setting forth a Triumph, a Statue, a Tabernacle, or such like things: which proposition shall be made thus. The ordnance of thickness shall be divided in 3 parts, and one of them shall be the thickness of the Columns: the Faries or 3 half about shall be half a Column thicke. The height of the light shall be the thickness of 7 Columns, and the Base and Capital together, of the thickness of a Column, and in all, shall be eight parts high. That Pedestall shalbe 3 Columns thicke in height, the breadth of every part like the Plinthus under the Column. The interColumns on the sides shall be one Column thicke, and in the Corners shall stand the fourth part of a Column: the wings on the sides, wherein the Niches are, shall be of the thickness of a Column and a halfe, but the Niches a Column bred, and 3 in height. The Architectas shall hang the halfe thicke, and the Triglyph thickly so broad, but the height without the Capital shall bee a 4 square, and two 3 parts: whereby, placing the Triglyphes on the right side, and on the left, right above the Columns, and between both 3 Triglyphes, and 5 Hethophas more: the beamen shall rightly come to bee 4 square in the spaces. The Cosana and the Frontispie, and all the other parts, as well belo, as above, shall be made as is taught in the beginning. And for that the Triglyphes on the sides differ from Vitruvius doctrine: yet, notwithstanding, I have place them in Antiquities stand upon the corners, the workmen may, at their good pleasures, make them in worke, so brace them out, as occasion shall serve. Further, I had no meaning to set any ground or platformes in this fourth Books, so that it is intended to be inserted of elsewhere; yet such schedule as are hard to be understood, I will set the Engraphephi 8e ground, so more light to the Reader.
Of the Dorica

Although in Antiquities, as former is found, when a Commoner had placed the Epithelia upon the round Columns, they set nothing else but the Fessurium upon that, being the same order in Churches and Temples, and in any other buildings: Neverthelesse, I will shew how to make some manner of Pests without Arches: so if you will make Arches with their four-square Pillars and round Columns before them for beautifying of the works, seeking to make much light in your Colonnies, the Pillars with the Arches will hinder a great deals of light: Then if you will set the Arches only upon the round Columns, that were altogether false, so that the four corners of the Arch would slant the roundness of body of the Columns: therefore I intend, to make some Pests and other Buildings without Arches, both of this order, and also of the other. This shall therefore be made in this manner, that the greatest inter-Columns shall be the thickest of four Columns, and the smallest of one and an halfe. The height of the Columns shall be of nine parts, both Seats and Capitalis: the Architectura, Frise, and Comite, &c. shall be made according to the former rule: the Undecore of the Windows are of two Columns thicknes: the height a four-square and two third parts: and their Pillars one for part of the light, leaving the Comite above, like the Capital. The base shall be of the breadth of thse Columns, and four in height: and so shall the lights of the Windows, and of the dooes, be all one height. The Triglyphs and Metopae shall be bent, as you may perceive. The second stop shall be one stop by a fourth part, according as Vitruvius giveth counsell: so also, shall the Architectura, Frise, and Comite be a fourth part thicker: the windows therof, with the Pillars, should be as broad as the lowest. The ornamentes in the Fitches shall stand in perpendicular, with the Columns: and the Halloings of the Fitches, shall be as broad as the inter-Columns: their height shall be of two fourths, and an half the third stop shall be a fourth part more; the second: The Architectura, Frise and Comite according: but being together bended in these parts, one halfe for the Architectura, the second, for the Frise and them of the soles, and the third, for the Comite: you shall find the particular measures here after the Compotes: the windows shall also be as broad as the lowest, but the Fitches shall be a fourth part less: the rest you shall liketly find.
The fourth Booke. The sixt Chapter. Fol. 26
Of the Dorica

Although in the Chalcean Order, in the Facie 1 3. I have showed the he : innovation, this, so in its standing, differently; for that this Gallery would be round eled, and where the Arches are, the crossings would be made as you se in the ground. And by that the Columns cannot uphold the sides, always going out, therefore above the Columns, you shall lay no taken Iron bindings, in the walls, as you see it in the piazzas, but they will last longer, if they be made of balsa. The proportion of this Facie shall be made thus: The greatest Intercolumns shall be 4. Columns thick, and the least two. The height of the Columns, with Bases and Capitals, shall hold 7 times their thickenesse. The Epistilum shall bee those fence parts of a Column thick: above the light, there shall be a half Circle made; the breadth thereof shall be a Column thick: upon the Arch you shall set the Column of the height of the Epistilum. Betweene both the Arches there shall be the matter of a window made, the sides, made thereof shall be like the Intercolumns under it; and the List of edge, as broad as the Arch. That Column erected, and the Chaine above the windowes, and part of the Column, shall, nevertheless, be sent out somewhat above the windowes, so to beautifie the same. The thickenesse of the Dorics shall bee two Columns, and one fourth part. The Pillastor or Antipagamentum, shall be a part part of the light: the height of the light shall reach to the首都fette, but under the Capital of the Column: which same of Capitals shall follow above the paces and windowes. The light of the windowes shall bee in breadth two Columns in thickenesse; but their thicknesse afterwards, in those sides, are to be divided as the Columns fall out. The length of the light shall bee a square and a half: The Sichel shall also bee of the same height. The Pate above, or the second Stage, as you will terme it, shall bee less or twice a fourth part, deduced in this sort: The Podium 1/2 part bee high, of one Column and a half thicknesse. The rest shall be divided in five, one of them shall be Architrave, Frise and Cornice. The Siches both the Ornaments shall stand in Perpendicular above the windowes, between the Arches, but shall be in breadth four parts: two parts shall be the Columns, the rest the Sichel with the Pillasters. The Cornice above the Sichel shall be the breadth of one of the Columns: and the Bases, the half breadth thereof. The windowes between the Sichel, shall in the light containe one fourth part less then the base, and of double height: but of the rest of the Ornaments (for that this work is somewhat more) you shall find further satisfaction in the Dorica and Corinthia. The Triglyphes in this composition, both the one and the other, will not make their Parapet eight square, because I have let this Triglyphs above each window, and as many over every of the Siches, as you may see in the figure: where in, if there be any thing tending in the manner, or else that, I always referre my selfe to the rule let wrote in the beginning.
Of the Doric

...that sometimes, some men will have altogether Arches and Galleries, and so that it is confused worse, to place Arches upon round Columns, yet a man may make square pillars under them with Bases and Capitals, like the other. And although this house is whole, which is but little for a man that hath a great living, yet you may set it forth in 2, Arches, also in 3, Arches. The Division whereby may be, that each Intercolumn may be of the thickness of some Columns. The height of the Columns with Bases and Capitals of five parts: and above them the Arches to be set of the breadth before, as halfe a Column: the epistyle shall bee of double proportion. Above the Arches you must place the Architrave, Frace, and Cornice: the height of them all shall be of 2, Columns thickness: and being denuded in 3, parts and a halfe, one part halfe the Architrave, halfe a part for the Frace, and one part for the Column: for the other part, you shall follow the rule aforesaid. The base shall be two Columns outward: the Pilasters, the first part of the height: but the Corners of the door, and the windows, shall have the height of the Capitals. The windowes halfe a Column and a halfe bearing out: and their length of height, shall be taken in the diagonal manner. The corner Columns shall be as broad as the other: but they halfe of 2, parts and a halfe high. The second story above this, shall be a fourth part lese: the corner Columns, with Architrave, Frace and Cornice, let them accordingly: The windows above the Arches, with the Pilasters halfe as wide as those below: but the height of the 2, foursquares, and the Frace, shall be as broad as the Superstructure: the Cornice also as much: The small windowes abow them, are made for two purposes: The first, the Roomes being high, as they are outwardly, will make the chambers and other rooms much lighter. Secondly, so necessity a man may make hanging chambers in them, and then these lights will serve to good purpose. The third story halfe lese then the second a fourth part: and the same being denuded in 3, parts, one part halfe for the Architrave Frace and Cornice: and that part denuded in 2, one part halfe for the Architrave and Frace: and the third for the Cornice: and in the Frace, the Pilasters and Superstructures halfe denuded, as you in them. The lights of the windowes halfe as the others, but they shall be a sixtieth part higher, because they are further from the light: the Pilasters, Frace and Cornice, shall be like the other. The Frontispiece and Arches shall be made, as I have said, in the bases and gates of the Order of the Dorics: so beautifying, to place another rowe of Arches in it, you may set Arteries or Pillasters upon them, which shall pass well in the making of their free places, or chambers for standing of frieze. The spaces between the windowes, that remaine white, are left to be painted, as the workemen will, at the pleasure of the owner of the house. But for more security of this building, it halfe necessary to place thes Iron bands in it, or at least, over the Gallery, as is taught before.
Of the Dorica

If the famous Town of Venice, because houses stand near together, they are forced to make their lights as they may, so that their Building suffereth much from that Want of Light, notwithstanding, the Workmen may glue them light enough, observing Antiquities, which shall be thus made and devised: You shall devise the thickness of an Arch in 3 parts, and an hole, whereas one shall be for the head of the whole Pillar: the thickest of which must be the half, the round Columns also as much: the height of the Arch half of one 4, square, and two 3, parts: you may also make them of two 4, squares, heightening the rest accordingly. The Pedest of Capitall under the Arch, shall have the half thickness of the Column, according to that which is showed before, of the Theater of Marcellus. The Dofes shall be of those Columns thicke inbetweene, the height of a square: and two 3, parts: the Pilaster or Antepantomum half of the 8, part of the light: the Corona half like the Capitall: but the Pilaster being set upon it, you shall make the Flutium as is before said, and about it give more 0, light, as the house requireth. If the building stand in a field or in an open place, you make rooms, which shall well fall out with the building: above the Columns, the Epistillum must be set of half: a Column thickneffe: the head of the Triangles also as much: the height shall be made more 0, thicke, at the Workmen's will, that the spaces may. 4, square, whereupon you must set the Cornice of a 6, part higher then the Epistillum: the particular parts and measures, you shall make according to the rule before set downe. The Story above shall be a 4, part thicke, making a Plinthum under the Column, of such a height, as the Proportions of the Cornice beareth: the rest must be divided in 5, parts, one part shall be the Architrave, Facia, and Cornice, (which, as before is taught) shall also here be divided in these parts. The Columns which uphold the Architrave, shall bee nine parts high, the richer Columns which uphold the Arch, are thicker then the rest a third part: the spaces in the middle, under the Arches shall be twice so wide as the sides: to then, the Cornice being placed upon the Columns which bear the Arch, and the half Circle made up to the Architrave, also, the eyes of holes besides the Arch, for it will bee exceeding light: and where there entereth a Chamber, you may that the middlemost lights, and the sides shall serve for windoises, Nevertheless, this advice being observed both without and within, it will not stand much amisse: for the place that up, shall be for a Fire place or Chimney, which ought always to bee made betwixt two windoises, like to a man's face, where the windoises are the eyes, and the Chimney the nose, which always carres the smoke.
Of the Dorica

To decide this present Facie, sayth the Author (for otherwise he maketh no pretence) you shall divide the breadth in 14 parts, and one of these parts shall be for a Column: the middlemost inter-Columne shall be of 5 parts, and the other each of 3 parts; the windowes shall be of a Column, and an halfe: the height of them, two 4 squares and an halfe. The pilasters shall be of the first part of this light: the windowes in the first story are of the same breadth: the nethermost, shall be a perfect 4 square, and the other of a 4 square and an halfe. The part of Gate shalte 3. Columns in the, that the Columns may have a full foundation; the height of this Gate is a 4 square, and of two 5: parts the Arch-Doors, and the rest, you shall see sufficiently in the Figure: from below under the arch, until you be above the Face, shall be 2. Columns thicke. And although that all other stories of buildings, being one story above another, would alwaies bee hauked a fourth part: yet in this case, (by my advice) so that the comparision of the Columns, being above this rustiche works, and that the rough works should not take too much place when it is of sufficient strength, it is requisite that it should bee of the same height. Above the first order, as you shall make a Podium of a Column 1 an halfe high, whereon you must let the Columns in order (as it is taught) the height without the Podium shall be divided in 5 parts, whereof 4 shall be for the Columns, the other for their ornamentes, whereof the Triglyphes must be tendered, as you see, observing the rule aforesaid. The middlemost shall be dealt thus, that the small Columns shall be the hale of the prater, and the middlemost inter-Columne shall be broad againe as long that stand on the sors, which shall be like eyes of the windowes. Above the windowes, to make more light, you shall make the eyes, and above the smallest spaces in the middle, you shall make that you fo be haued in the Figure, as to accompany the same eyes. And although there rest particular parts, you shall alwaies take them forwarde, where you shall be aduert to find them. The third order or story, and that which belongeth the same, shall also be made like a 4 part, but the windowes is broad as the lowest, as also their heightes, and all other things, you may easilie find with the Compass. The coting up in the middle without the Frontispicium, shall be halfe the third order in height: for the rest, a Workeman may add and diminith at his pleasure.
The fourth Booke.

The sixt Chapter.
The fourth Booke.

The fixt Chapter.
Of the Dorica

Although the工作man hath made so many inventions in this Dorica worke, yet they will not further him in ornaments of Chimneys: but I will set two sorts here of here in Figure, one indifferent whole, e in the thickness of the wall, for a small round Chamber or House: the other, for a greater place without the wall, proportion with Suggestions: for if a small Chamber should be cumbered with a Chimney, it is requisite to make it wholly within the thickness of the wall, and the height of the opening being made, according to the situation of the place, shall be divided into some parts and an half, and shall be the breadth of the Pilaster, but the Architrave shall contain the half: the Tenia or Lift, going round about, shall bee a fourth part, and all his other Lifts of the same breadth: the Triglyphs and Suggestions, shall be half the breadth of the Architrave, but their height you shall take in this manner, that the Squares stand about the pilasters, and the Triglyphs divided between both, the Squares may have their fourths of the breadth of the Architrave, but yet the Squares of spaces between the Suggestions, shall not be four-square. The Capitals of the Squares and Triglyphs, shall bee so high as half the breadth of the Triglyphs. The Corona, with the Seima and Scima, shall bee so high as the Architrave; and being divided in two parts, one part shall be for the Corona; of the other you must make these parts, one for the Scima and the Lift, the other shall be for the Scima with his Lift. The bearing out of the Corona shall be so great a little, that the spaces betwixt the Capitals of the Triglyphs in the ground of the Corona, may be foursquare, so that if men will go round about it they may have their place of light. The Proportion of the Scima with the Scima, shall be made like that height which standeth above, at the discretion of the workman. But if the Chimney be very small for a little room or Chamber, then a man shall make the Pilaster of the length part of the height at the opening.
Of the Dorica

This other Chimney without the wall, shall be made thus, when the height and wideness of the place, according to the situation, is appointed, the same height, from the ground up to the Architectura, shall be divided in 4 parts, one part for the Architectura, trestles, &c. Termes, their parts being made according to the rule above-said: and whereas they grow greater, that is, because men lie them underneath, the breadth of the Sfodigions shall be the 3, part of their height: the Capitale the half of that breadth, and that be divided as it is laid of the Doricall Capitales: some letten the breadths of the Sfodigions underneath the fourth part, that the foote of them may give out a fourth part, so that the pilumhs under the foote, is as broad as the uppermost part. But if you will make such Sfodigions all of one breadth, I would commend it in a great work, so that the undermost thabins to the wall, a going from our sight, lessen themselves: so that the part which receiveth the smoke, is Triamides: whilst, which it not stand well in a great height. You may let it upon the first Termes higher or lower, as you will, according to the situation of the place. This building of Chimneyes may be made in great forme: but if you will make them small, then you shall divide the height from the Pamelaent to the Architectura in 4 parts, whereas one shall be for the Termes; the breadth of the Sfodigions shall be the ninth part of that height, the Capitall at halfe the breadth; and thus it will be more safely in an indifferent manner forme. This I speak by experience, so that I have observed this greatest measure in small forma in making of Chimneyes, but they prove to great.

The end of the Dorica order: and here followeth the Ionica.
Of the order of Ionica, and the Ornaments thereof.

The seventh Chapter.

Vitrùmus speaketh of Ionica, in his fourth Book, and 1. Chapter: and as I also said, the ancient Pagans tooke this kind of worke from women, and ascribed it to Diana, Apollo, & Bacchus, &c. But we that are Christians, having a Temple to make of this worke, we will dedicate it to such Saints as are of nature, euyther weak or strong; so likewise, common worke are fit for peaceable people, men, euyther great workeemen, nor all too simple in workmanship: and such workeemen are fittest for such worke. Now let us come to the measures: the Ionica Column, by a common rule, must be of 8. parts, with Captall and Bafe; although that Vitrùmus saith, it must be of 3. parts and an halfe. So may men sometimes make it of 9. parts and more, as some indifferent workeemen have affirmed. But this, I say, shall be made of 8. parts, which must hold his thicknesse below: and so shall their Bases be of halfe the same thickenes, which Vitrùmus fayth, downe diligently, in the 3. Booke, and in the third Chapter of the fame Booke, in this manner, that the Bafe aforefaied, must be of halfe the Columns thickenesse, but the Plinthus must be of the third part thereof: which Plinthus taken of, you shall make seven parts of the rest; whereof three shall be for the Thorus, and foure shall bee for the two Scories or Trochiles, with their Afragals and Lifts, fo that each Trochile must have his Afragall. The Afragall shall be the eyght part of the Trochile, the Lift halfe the Afragals. Although each Scotie with the Appendances are all of one height: yet the vndermost shall bee greater: for it shall shoot out vnderneath, to the outermost part of the Plinthus. The Proceiture on eyther side, shall be on eyght part, and one fixt part: so that the Plinthus on eyther side shall be one fourth part, and one eyght part more then the thickenesse of the Column: Now, for that the Cincter or Lift is suppressed by the greatness of the Thorus, I am perswaded that it ought to be made the halfe greater then the other. Observe in all the members and parts with discretion, as should be vted in the Dorica.

Of that the Bafe of the Ionica Pillar, written of by Vitrùmus, contenteth not the greatest workeemen, because the Thorus is very great: and the Afragall small, under so great a member, according to the judgment of expert workeemen, that have oftentimes disputed the fame, with reverence, and much respect of such an Author; I will frame one here according to my opinion. The Plinthus being made, as I have before, the rest shall be divided in this part, whereas one part shall be for the Thorus: the other under that Thorus divide in the parts, one of them for an Afragall, the Cinthe the halfe thereof. The Cinthe as suspender under the
The fourth Booke. Thefeuenth Chapter. Fol. 34

Scijc reff is to the fecotie of Crotbile? tbe othet parts that rest, Hall also be divided into five parts: one for the Allragall, one half for the Cintbe, and the undermost also the like: the rest is for the Booeis comming at burnecth, as is before alleaged.

The Ionica Capitall shall be made in this manner: the height shall be the third part of a Column, and the former part of a Abacus the breadth of a Column in thickness: so also must be added the 13. part, which in the whole shall be nineteen parts. But towards a part and a halfe at either end the line Column shall be divided, which shall contain 9. parts and a halfe, which is the halfe breadth of the Capital: one part and a halfe shall be for the Abacus, which Corners you must make like the right or left side, for both are ancient: the 8. parts that are hanging under the Abacus shall be for the Volutes. And so that it would be troublesome in this small Figure, especially to let down before your eyes the numbers, therefore in the Leafe following, I will shew it better in great, and therewith shall the manner how to make the Figures in the Columns with the Figure of the like of the Volutes, and of the Capitals. But if the Column be of 15. footes downwards, then it shall be lessened a little part above, as it is written of the Chalican order: but if it be of 15. foots upwards, then I referre you to Vitruvius, touching the same, in his third Booke and second Chapter.
Of the Ionica

When the Capital of this Ionica is made, you must make the Volutes, which shall be made by the line, called Catheta, which bee here call'd, The right Line: and when you leave the Marcus underneath four parts, then the first part shall be for the eye, and to there ye yet call'd this parts from the eye downward; and to in all, they make eight, as is before saipd: the eye shall be denoted in the parts, and the numbers set therein, as it is here set downe; then place one foot of the Compass upon the point r. and the other foot over the Marcus, drawing nothing, by to the Catheta, to the right part, then letting the same foot of the Compass hand, being the other foot of the Compass 2, and 20 it upward againe to the Catheta. Then hold the foot of the Compass there, bringing the other foot to 3, drawing it then downward againe to the Catheta: keeping that note there also, his the 2 that upon the point 4, then drawing it againe to the Catheta, holding the Compass there, the foot will come upon 5, so drawing about, bee likeable to 6, and then it comes to that with the eye, there you may make a root, if you please. The rest of the particular numbers you shall easily find with the Compass. The Lattices of the Columns, which bee call'd Chansels of hollistings, shall be 24, in number, and one of them shall be 3 parts: whereof 4, shall be for the Chantes; Chantes, and the 5, for the List, by Vitruvius called Steirs: and so from one side of the flat of the List to the other, you shall rate a straight line, the middle whereof shall be the Center of the hollowing out. But if the workman please sometimes to make a thyme Column to form the trunk, then there must bee 28, Strokes: the Marcus of this Capital is as head on the sides, as before: which sides are proportions, according to that, which is said before. Friendly Reader, I have laid this Notice, according to my simple understanding, because Vitruvius writing in hard to understand, and which is more, promised the same Figure in the last Books, together, with divers other agreements, which Books is not to be seen.

S. Serisi upon the speach aforesaid.

Liking Reader, there are many things which cannot fully, from point to point, bee shewed in Figure, unless the workman must help himselfe by practice, like as the Circite, or bent of these Volutes: which (in the Capital bee very great) will stand well: if the breadth commonly the first part of the eye, and if the Capital bee of indifferent greatnesse, then it must be made of a thin part of the eye: but if the Capital be small, then it must bee the half of the eye, always at the workman direction: for I have seen it in Antiquity, although they differ. The thicknesse being made above, about the Marcus, then you must place the Compass little below the figure 1. from above the Catheta downward: then againe, you must place the Compass a little above the figure 2. drawing your line from beneath upwards to the Catheta.

Now, whereas I have said, that the last Book promised by Vitruvius, is not found, by means whereof, divers opinions are made abroad, touching the same, some affirming, that in Vitruvius time, there were many unskillfull workmen (as there are now also) having better fortune, then good understanding: (others) that wantonness, rather to unskillfulness, beareth such sway among common workmen, that understand not themselves, it is thought, that Vitruvius refused, as at least, would not publish it, in regard of the unskilfulness of such as neglect good learning. Some also affirm, that it was too hard a matter for him to place them in figures; which I can hardly judge to be the mind of such an Author. But whereas some affirm, that this last Book was so pleasing and acceptable, in regard of the figures there at large set out, and be being overseenprin in looking upon it, was robb'd thereof, among other riches and treasures, by mischance or fores: this I believe not, in so much, which is enemy to all good Arts, which yet, at this day, is especialy to be lamented, for that men by the figures, might have made diversities of work in the right manner.
Of the Ionica.

I have declared hereafter, according to Vitruvius writing, how to make Ionica works, as scarce as my learning shall serve. Now, I will shew how some Antiquities in Rome, of that work, are made and standing. The Capitol M, standeth yet in the Theater of Marcellus, whereas I will set before some general measures: the foremost of this Abacus is like unto the Columne below. The Volutes give out a first part of the Abacus, and so farre out as the base of the Abacus; the height of the Capital is a third part of the Columne below; but for that some workmen thought that Capital to be but barely set forth: they have added the Trabe which you see in the Capitol, unto it, making the height of the Capital of a third part of the Columne thickener below, which Capital is at this day to be seen in Rome, with others of the like.

And so that it may sometimes happen to the workman, to make a fourseare shuttling with Ionica Capitals, so that some workmen have erred in placing of the Volutes, to helpe or take you of that error, it shall be needfull to make the corner Capitals, as you see them in the ground: of such Capitals, there was the like found in Rome, which caused many to budge, whereas it was made in such manner so it was called, The confused Capital: but at last, after long deliberation, it was concluded that it had stood in an open corner, shuttling by the order of the Columnes marked A. But if the workman have flat Columnes to place against the wall, in this corner, that the Volutes may come alike on both sides, the workman may place them, as in the ground B. is set downe.
The fourth Booke.

The sevenfh Chapter. Fol. 36.

The Epistilium as Architectura is made thus: If the Column be of 12. to 15. fote high, the Architectura halfe the haife of the Column beneath: if it be of 15. to 20. fote high, then it shall be divided in 13. parts: one halfe the height of the Architectura; and from 20. to 25. fote, the Column shall be divided in 12. parts and a halfe: one part shall be given to the Architectura: if the Column be of 25. to 30. fote high, then the Epistilium shall be the twelfth part of that height: if the Column be higher, you must increase the Architectura more: for the further it goth from a mans light, so much more it leseth of the greatnes. The Architectura being made of his two light, and divided in 7. one halfe the Cimatie; the Projecture thereof, also so great. That which is over, is divided in 12. that shall be given to the first Facia; four to the second, and due to the third. The thickness of the Architectura under, halfe like the Column above, in the thinnest part; but the thickness of the Architectura above, halfe like the thickness of the Column below. The Zophorus or Frise shall have the measure according to the length of the waie; but if there be somewhat to cut or grue in it, then it must be made a fourth part higher then the Architectura: but if it be made plane, without cutting or graving, then it must be a fourth part less. The Cimatie must be set upon the Frise, which must be the seventh part of the same Frise; and the projecture also as much. Above the Cimatie must the Denticules be placed, in height, like the middlemost Facie: and the Projecture like the height. The breadth of their teeth must be double in height. The intercuttert or hollowing between the teeth, halfe a third part less. The Cimatie is the first part of the Dentile. The Coyna, with the Cimatie thereof, is the greatest of the middlemost Facie. The Projecture of the Coyna, with the Denticules, is as much as the height of the Frise, with the Cimatie. The Scina is an eight part higher then the Coyna. The rule of this thereof shall be a first part, and the Projecture like the height. Also our Paphos alhuth, that all Echopes or corners will stand well, when their projecture is like the height.
Of the Ionica

Do that the towers of Rome differ from the writing of Vitruvius, I will frame another column. Whereof the Architrave, Frise, and Cornice, shall be the fourth part of the height of the Column: which 4th part divided in 10 parts, that shall be to the Architrave, divided after the rule aforesaid; 3 for the Frise, and 4 for the Cornice: which 4 shall be divided in 6, whereof one shall be given to the Denticles, one to the Cimatic which upholdeth the Battlements, and two to the Battlements and the Cornice, the rest to the Scima. The Projection of all, shall be at least as much as the height: upon such a Cornice was found written, A Sancta Sabina, at Rome, in a building of the order of Ionica.

And it sometimes it be necessary to equal by Columns, being not compelled to pinch by any thing thereabout, then the proportion of the Pedestal shall be thus; it shall be as broad before as the Plinthus of the Column; but the height of the flat of the Pedestal shall be a square, and a fourth part: which divided in five parts, one shall be for the Base, and one for the Cornice, which in all is eight parts: to shall the Pedestal be of eight parts like the Column. This must alwayes be understood in common, that it is left at the discretion of the Designer.
By reason of the great difference, which I find in things of Rome, from those which Vitruius wrote of; therefore I have here named some of them, that are best knowne at this day, extant in Rome to be seen in works. The Copnices, Frise, and Architecure marked T. is in the Theater of Marcellus, in the Ionica order, above the Homers; the Pilaster with the base thereupon, also marked T. is in the same order, under the Ionica Columnne. The Copnice for the impost of an Arch, also marked T. is of the same order, and upholdeth the Arch. The Copnices with the hutiles marked A. was found at S. Adrian, and S. Laurence, in Rome. That Architecure marked F. was found in Nel Frisle: which Architecure, for that it had these Facies without Astragals, I judge to be Ionica. Here is nothing said of the measures hereof, so I have diligently reduced them from the great into the small; which measures are eafe to be found with the Campalle.
Of the Ionica

Although that the Thuroraturn Ionicum, that is, the Dowre by Virnrris described, in my opinion, not proportioned to answer the building (as it ought to do); therefore I will speak thereof, according to my knowledge: I also find, that Virurnius writing is not right, touching the height of the light of this Thuroraturn Volce, viz. from the Pavement to the Lammar, there were 3 parts and an halfe more, and two parts thereof were for the height of the light, where by the Coipa was very high, as also of the Piceon. But there followed yet another course, viz. making the Dowe 3 parts high, setting those parts thereof below, as Virurnius saith, also leftened in the upper part, like the Dowsa; then I finde that the wideness thereof commeth to be broader then the inter Columnes in the middle, making a Temple of 4 Columnes, with the meareage which Virurnius hath set downe in his 3 Bookes, as I have set it downe here in Figure, that workmen may see the correspondance of this Gate or Dowe, with the Temple thereof; which, in my opinion, is not thus, for this cause, viz. if the dowe of the Dowsa, which parte of Columnes is lower then that of Ionica, hath the height of 2, 5arequares, and a little more, I say the Ionica dowsa, whose Columnes are higher, ought to be higher also for light, then the Dowsa. But it is not so much, according to Virurnius Bookes, which saith, 2 parts in height, and 3 parts in brench; but let all this be spoken with reverence to so great an Author. Nevertheless, leftening the parts in Virurnius Bookes, which may be to some purpose, I will make another Figure thereof, without leftening it abowe; but he that for his pleasure will leften it above, obstruct the Dowsas order.

The Translator.

What Virurnius saith, touching the height of the light of the Dowe or Gate of this Dowsa building, there is sufficiently spoken; but touching the inbents of this Gate or Dowe, where he saith, that the height of opennesse thereof should be divided into two parts and a halfe, and the inbents thereof, to have one part and a halfe; it may be, as it is in other places, that the place is satisfied; and it may also be, that it is a quarter too much; so if it be made of 10. 2

height, and 3. 2 in brench, the light therein being of 2, 5arequares, would be reasonable, so the Inter Columnes were as wide as from the Dowsa; for it is of four Diameters, and this but of those Columnes wide, and the Antagmen

tum would not be decentered, so that leaning out a quarter, this building would thereby be more perfect.
The fourth Book.

The seventh Chapter.

If the light of this door ought at least to be of 9 or 10 square, the Antipodium or Pillaster shall be 12 part of that height, made in such manner as is said of the Epistilium Jonicum, where the Attic gable shall be added, as it is showed in the Figure F. If a wayman will cut any thing in the Frese above the Supericulum, then it must be 4 part higher than the Supericulum; but if you leave it plain, it must be a fourth part less. The Corona, with the other members, shall be as high as the Supericulum, named as you see it in the Figure F. The Stones or Proctriades shall be broad above, like the Pillaster, but in the other part, like the height of the hanging light, shall be given a fourth part, from the which the leaves hang, as you see in the Figure F. That part of the Circle, in head of the Fattigium, shall have his height made in this manner, with a compass you must reach the two corners of the Sestim in the uppermost part, and one foot of the Compass sitting to the point of the crofe, with the other foot, the part of the Circle being drawn, shalbe the height, which will be the third part of a Circle; which manner of making; not making of a Fattigium, halbe always referred to the pleasure of the wayman; it may also serve for windows.
Of the Ionica

The light of the Gate following, is more then double proportion, viz. of two foursquares and a quarter: the flat of the Pyliers shall be the 8. part of the breadth of the light, and the Columns shall be twice as thick: the same Column shall be placed above a first part: the height shall be of 9. parts, with Bases and Capitals, according to the measure aforesaid. And although these Columns hold a part more then the rule aforesaid, yet it is not therefore true, for that the 2. third parts stand only without the wall, bearing no weight then the Frontispicium: further, if by any accident these Columns should exceed 9. parts, yet were it not to be blamed; for they are only set for an ornament, being made fast in the wall. The height of the Architreciae shall be like the Superiectes over the doyleth. Feet shall be cut, and shall be made higher, as is below: if it be not cut, you may letten it so much lower: the Columns shall be higher, like the Epistyllum of Architrecia: with the other parts you must handle, as it is said in the beginning of this order. The Frontispicium shall be referred to the tail of the workman, either to make it higher or lower, by any of the aforesaid rules. By this intention, a workman may help himself in many things, making the light high or low, as need shall require; as sometimes of a foursquare, as of two third parts: but if the workman be not otherwise compelled, I should best commend the double proportion, that is, of two foursquares.
The fourth Booke.  The seventh Chapter.  Fol. 39
Of the Ionica

Although I have set this rudical Gate in the order of Thucenta, and not only in many places applied it to the Thucenta, but also mixed it with the Dorica, yet I have placed it here with the Ionica: although it is not there to be set in all buildings that are made after the Dorica, nevertheless, to god intent and purpose, as without in the country, in such a case also, it is not to be discommended in a Civic 2 Towne, for a Merchants 2 Lawyers house, in which places it is tolerable. But in what place former a man will make it, in a manner of bearing over, then the proportion of this Lodge shall be thus: the light up to the Arch shall be two squares, and the pilaster the 4 part of the breadth of the light: the Column shall hold the fourth part thereof, but the height shall be 9 parts with Bases and Capitals. The Arch of the bolls shall be denided in 13 parts and a quarter, because the middle most stone shall hold a quarter more than the rest. The Architence, Fresco and Comices are together the fifty part of the Columns: of which three pieces, the workman shall make 1 1 parts: 4 for the Architence, 3 12 for the Fresco, and 4 for the Comice. The height of the Podium shall be the breadth of the light. The Comice and the Bals may be taken out of the aforesaid Striobato: but the other Bals, Capital, Architence, and Comice, shall be made as it is laid in the beginning. The Archi- nces and the other that bind the Columns, you may lay in the Figure.
The fourth Booke.  

The seuenth Chapter. Fol. 46
Of the Ionica

Although the height of this Arch is not of double proportion, as the most part of those which I have hitherto set it is not true, but is made by good discretion, so that it may somewhat fall out, that in the proportion of a Facies, upon occasion of any necessary height, and to make the Arches unequal, which should be to place the principal gate in the middle, which in such case should not attain to such height: but if we be not constrained by any necessity, I more commend the double height, then any other proportion. The width of the then between one pilaster and the other half the 3 parts, and the height 5. but afterwards the width being divided in 5, then the whole pillars which stand before the 2 pilasters, have 2 parts, and the thickness of the Columns shalbe one part: the pilasters shall each of them be of half a Column in thickness: likewise the Arch, and the Impoxt which upholdeth the Arch, are of the same height made, as it is shewed in the Theater of Marcellus marked I. The Columns shall be parts high, with Halles and Capitals, made according to the rule, in the beginning of this Chapter; but in the middle halls half the thickness between the pilasters: the height shall be found in this manner: The pilaster being made of the first part of the light, the Cornice like the eyes of the Impoxt, placed above it, and the Scima upon that, making after ward the Frise the fourth part, then the Antipentament, then the height will find itself, which will be little less then two four squares. The Frontispice shall be made according to a rule set downe in the Dicia: the Architrave, Frise and Cornice shall be made in height, of the fourth part of the heights of the Columns, by the rule 3. foreiagd. The Story above shall be lower by one fourth part: so shall the Architrave, Frise and Cornice bee of the fifth part of that height, which shalbe the fourth part of the height of the Columns: but touching the division of the particular members, you shall find them in full measure in the Order of Composite. The windows being made with Arches, shall be breadth like the door: likewise the pilasters and the Arches, but their height shalbe two four squares, and a halfe, which is to give more light in the chambers. The Columns shalbe flat, and one fourth part shorter than the latter. The bread of the arches betwixt the columns and the windows, is one Column and a halfe, the height of four Columns thickness. Thus of any parts of members that bee resting, you shall find measures to make them by the prescription of the aforesaid rules of that order: so of this Cornice, you shall find the measure in the beginning of that order. Above this story, he that will may make a walking place, well defended from water: and that the height of the Pedestian were of reasonable height to leave upon, so to rest upon with a manes armes, these Facies would be a great beautifying to the building, and much safe to the inhabitants.
Of the Ionica

S

Parttime, as is said, a workman shall find a great number of Columns, but so long, that they will not reach high enough for his work; if he cannot help himself therewith, and apply such members, is to serve the building which he hath in hand: therefore if the height of the Gallery riche higher then the Columns, then in the middle of the Facie you may make an Arch, being upheld by the Architrave, which shall above the Columns, which Architrave shall be the Impost of upholding of a round roof. But where the Arch shall be, there shall be a Circlet, as the workman may in that ground; and for strengthening thereof, let there be iron or metal bars laid over, as it is taught in the Geometry. But the denimation of this Facie shall be, that the middlemost Intercolumne shall have 6 Columns thickinell: and the height of the Column, with Base and Capital shall be of 8 parts. the Architrave holdeth as much as the Column is in thickinell above: likewise the Arch above, which the workman shall make a Comice, which height shall hold a fourth part more then the Architrave, without the fourth part, with the lift: which Comice shall also serve for a Capital upon the Pillars, above the Columns, and shalbe of the same breadth that the Column is above. The Intercolumnes on the side shall have of 5 Columns in thickinell: the height of the base shall be, that the Architrave under the Arch shall serve for the Comice above the base, changing parts by their numbers, as it is figured. Under the Comice there shall a Front set, which shall have a fourth part less then the Architrave, the Supercillies with the Pilaster of the same height. But as much as shall under the Supercillies, to the Bayes, or that half, the breadth of the light shall be made, and the light shall be of two square. The windowes shall stand as the eyes of the base stand, and their wideness shall have of two Columns thickinell, but the height shall be taken in Diagonall manner: the second Step of Step shall a fourth part less then the first, the Jordan being taken of a reasonable height, that which riche shall divide in 5 parts, some where or shall be for the height of the Columns, then the other for the Architrave, Frace and Comice, observing the given measures of such a Step. The breadth of the window in the middle, is with the Antipugmentum as wide as the light of the base, but the light shall be double in height: in the Ornaments as borne, workmen may follow and observe the rule set there. The windowes on the sides shall be like those that stand below, and their height like the greater: the coping in the middle above the second Step, shall also be a fourth part less then the other, and ruff part thereof letthered accordingly: for the light thereof, the order of the lowest Step is observed: but the making of this third Step, as then not making thereof, is at the pleasure of the workman.
The fourth Booke.

The seuenth Chapter. Fol. 42.
Of the Ionica

As it is said in the beginning of this Booke, the manner and order of the Ionica being made after the Feminine kind, it is likewise a materiall thing, that having a Chimney to make of that order, wee must, as near as we can, make same show of that sate therein; the proportion whereof halfe thus: that height of the openettke; being placed, it shall be from the ground of the Chamber or Hall, to the Architrave, eight parts high, and that shall be according to the placing of the Columns, which shall be such like, monsters or strange formes (as we call them) made in this manner, which shall serve for Mogullons. The Architrave, Frise and Copnne, shall be the fourth part of the height, as it is before said. The table upon the Capitals, which concerneth the Architrave and the Frise, I judge, that ancient workmen have bled to finde more space to inrude in; and also, so that they knew better of noe other which faile, whether it be made or not made, is referred to the will of the workman. The second order, with the Dolphins, is made for two causes, the one is, to make the mouth of the Chimney, which both recepche the smoke wider: the other is, to make a Piramidall forme, making the necks of the Chimney in a Chamber, but it is still at the will of the workman, to make them moe or lesse, or not at all.
Of the Ionica

This manner of Chimney is very ease to small rooms, and they are fleed to be made lower than a mans light, that the fire, which to some persons eyes, may warme the rest of a mans body. The wideness of this Chimney is a full square: the pilasters shall have a sixt part of the wideness: the Cymatike the second part of the pilaster. Of the rest you may make 12 parts, 3 shall be given to the first Fasce, 4, the second, and 5, the third Fasce: and for more beautifying, a man may also make the Mitragals, as you see them here in the drawes. The height of the Totales shall be like the 3 Fasces without the Cymatik, and of them must be made 3 equal parts. One part for the Totales, with the James like the 3, and the other for the Cymatik, with the Mitragals and till, the third shall be given to the Mitragals, which shall hang on the sides like the Cymatik, but the leaves shall hang downe as low as the Architectura. The height of the Coizon, with the two Cymatik, and the Scima, are like the second and third Fasce, together with the Cymatik: but the figure of Commay. Cymatik, and Scima, each of them hold as much as the height. This like figure I have made in wood, very well liked of: but, as is said of the other, it by occasion of works it taketh over much place, then you may make the Pilasters of the 3, part of the wideness, so will they be much more legibly of themselves. That part made over the Ornament is also of the woorkemans will, for this Chimney is to stand in the thickets of a wall, so that this Ornament, of this Order, would serve for a window or boze.

Here endeth the Ionica Order of building: and these followeth the Corinthia.
Of the order of Corinthia worke, and the
Ornaments thereof.

The eights Chapter.

F Corinthia worke, Vitruvius speaketh only in his fourth Booke, and the first Chapter, in a
maner as if he would say, that the same, which is sayd of the Ionica Columne, is in Corinthia
worke: and in his second Chapter hee speaketh of Mogdillons among the Coronas, therefore
I will not give any rules or measures of the other parts; but the ancient Romains vuing this
order of Corinthia much, (as also the rest) made the Bases of these Columnes, with a great number of
members or partsfull of worke: of which Bases to set downe some rules, I will speake of one of the fayref
buildings in Rome, that is, the Pantheon, called by the name of, Our Lady de Rotonde, setting downe all
the measures thereof. The Colonne of Corinthia worke is made by a common rule, consisting of 9 parts
in height, with Capitalls and Bases: the Capitall whereof, shall be as high as the Columnes is thicke below,
but the Base shall be of halfe the thickeenesse of the Colonne: of this halfe, or height of the Base, there
shall be foure even parts made, whereof the one is for the Plinthus, the other three shall be divided in five
equall parts, whereof one part shall bee for the Thorus above, but the Thorus vnder shall be a fourth part
thicker: so that which refeth shall be devided into 2, euene parts, whereof one part is for the Scotch below,
with the Aftragall, and two Lifts or borders: that Aftragall shall be the first part, and each lift or border the
halfe thereof: but the lift or border vnder the nethermost Thorus, shall bee a third part more then the other.

The Procureture of the Plinthus shall stand above in another order of Columns, making them like
the Ionica orders, but if the place be beneath vpont the ground, then the Procureture shall be like the Dorica
order. Also according to the place where the Bases shall be placed, so the workeman must adde or diminish,
as is before sayd: for these Bases stand beneath the fith, it will stand well: but if the bee placed above the
fifth, then all the places that are vied by the other members, with their general distancies, shall be made grea
ter, then by this rule is prescribed. And the higher they be set, so much the leffe and fayre feeme the
members therein the workeman of the Rotonde was well addeed, for that bee made the Bases above the
first story within, with two Scotch, but yet with one Aftragall alone, in stead of two.
The fourth Book.

The conclusion of the Capital Cinthia: treat from a Map of Corinth: but for that Vitruvius in his fourth Book and first Chapter described his projects, whereas I will not trouble my selfe to speake of, thus much I will say: A workman had a Temple to make at the Virgin Mary, or any other pointes that were Virgins, so Ones as Seruicds: as for parte of honest life and conversation, then a man mighte see this manner of work. The height of this Capital shal bee like the thicknesse of the Coloumne below: the Abscuses the seventh part of that height. The rest ther shallbe three parts made: one for the leaues below; the other for the leaues in the middle, and the last for the Solutes as we call them. But betwixt the Solutes and the middlemost leaues, there is a space left to the letter leaues, from the whole the Solutes grew. The Capital marked B. shall bee underneath like the Coloumne above: under the Abacus, there is a Cinthia made, the height whereof shall be half the Abacus: of which Abacus, these parts being made, one halfe for the Cinthia with the Lattes, and the rest for the Pinnatas. Under the four corners of the Abacus, the greatest Solutes are made, and in the middle of the Abacuses, there is a flower as great as the Abacus is thick, under the which the least Solutes halfe made, under the greatest, and also under the smallest Solutes, the middle leaues halfe set, betwixt the which the least leaues shall grow out, and out of them the Solutes spring. The middlemost, and also the undermost leaues, shall each be 8. in number, standing betwixt each other, as the figure C. sheweth. The undermost of the Abacuses, from point to point, haue two Diameters of the Coloumnes below: which Diameter halfe be placed in a square, a Circle diameter without the square: which shall touch the four corners: thence, without this great Circle, another four square being made, and bounded in Diagonall, that is, crosswise, those lines will Hew to be two Diameter in length; as Vitruvius teacheth. But from the line B. C. you shall make a perfect Triangle: and upon the corner X. shall be to make holes to the Abacuses: from the spaces betwixt the great Circle and the small, there halfe four parts made, one part that rest abone A. and these halfe thus taken away: the one foale of the Compass being let upon X, the other upon A. wating about from B. to C. where the crossed line shall reach on the two sides of the Triangle, there halfe the termination of the corners of the Capitales. The example is in the figure D. in this manner. The Abacuses shall come in perpendicular with the Pinnatas of the Base.
Of the Corinthia

Some Roman workmen, proceeding with more boldness, have not only placed Chimneys above the Denticules, but also made Puttles and Dentiles together, in one Comice, which is much condemned by Vitruvius in his fourth Book, and second Chapter: so that the Dentiles represent certaina teeth, by Vitruvius called Metes, and the Puttles are for the supporting of other ends of wood, by the said Author called Comers; which two kind of beams may not stand together in one place; and 3, for my part, would never endure Dentiles and Puttles in one Comice, although some aboundeth therein, and divers places of Italy also: but proceeding orderly in this manner, and a general rule, that is, that the height of the Comices, whether Dentiles or Capitals, shall be divided in 4 parts, whereas one is given to the Architectura, Freses and Comice, and such a height overreach with the Domes: the fourth part shall be divided in 10 parts; 3 shall be for the Architectura, as before said, 3 for the Freses, and 4 for the Comice. But of these 4, there are 5 parts made, one shall be for the Comice, above the Freses, 2 for the Chimney with the 1st, 2 for the Dentiles and Comices, 2 for the Comice, and the 2 last parts for the Sum, with her Chimney, which shall be the fourth part of the Sum. The Proportion of all shall be as before said: you may also make this Architectura, Freses and Comice, of the first part of the height of the Comice, as Vitruvius saith in his first Book, and second Chapter of the Theater.
The fourth Booke.

The lettering of the Corinthia Columnne shall be made, as it is by one of the other, and also thereafter as the height is, but of 16. stone dounemem: it shall be three, above the first part, by the rule alxer: and if it be measured so, tile, than you shall make it like the former; but from the third part, mentioned the coming 12 following shall be full, as you see it in the Figure on the left. The Corna is without Squillies, whereof the Architrave is half the Columnne thickester: the Frieze, for that it is cut, is the fourth part more than 5 Architravet and the Comice without the Comice of the Frieze, is as high as the Architrave: the height of all together is somewhat lesse than the fifth part of the Column: nevertheless, if the Proportion of the Corna be well made, then it shall bee the higher then it is, and shall be from within upon the building: Wherefore, that the third workman may place out those parts, that being then his estate, that he may not err: Variosus doctrine, and the great Antiquities, which met, he by his writing, acknowledge, if by any accident this Columnne had rest of a proportioned Pedestal, being not let by any occasion, then's proportion three of thalbe thus: the height shall be divided in 3 parts, whereof 2 parts shall bee for the height, that is, one fourth, and 2, third parts, (I mean the first,) which height shall be divided in 7 parts; one for the Bases, one for the Comice above, which shall be all 3 parts, proportioned according to the Columnne: but of the particular members of the Bases and Comices, I will hereafter them more, with some Antiquities, whereof men may take such measures as shall best serve their times.
Of the Corinthia

Among other Antiquities of the Corinthia, which are seen in Italy, I thinke the Pantheon of Rome, and the Arch triumphant, at the@pytest of Ancona, are the fairest and best to be seen: of which Arch, the Capitall hereunder marked A. is with great care proportioned after the great; which height is contrary to the writing of Vitruvius: nevertheless, it had good correspondence: it may be, that Vitruvius meant, that the height of the Capitall should be one Columnes thickness without the Abacus; but the rest herein is satisfie, for that I have not onely found this Capitall, but others more of such proportion. The Columns hereafter shewes, as it is shewed here: the Pedestall with the Base upon it, is a member of the same Arch, also proportioned in the small: the Comice heretofore added, was found at Al too transito in Rome; that marked with A. is very handeome, for a Corinthian Comice without Pedistall: that marked with B. is a little longer, but that with C. is the heightenest, because of the double part, it shewes no good grace from the Comice homewards: and also, for that the Comice, upon so much Comice, hath so small Pedestall. The Base of the Pedestall marked D. in my opinion, is very fayre, and also the Statement with E. I thinke hath beene a thing that hath continued in some building: which things, altogether, men may apply to the order of Corinthia; and in the Janicul I have seene the like. The Architrave V. is in Verona, in an Arch triumphant, which failes standeth contrary to Vitruvius writing: yet I have let them here to shew such difference.
Of the Corinthia

Of the doors of Corinthia. Wisarius speaketh nothing at all, but I will speake of the antiquities which are yet to be seen. The Gate as done marked S. Y. is at I woel, whyn the bine of Auiere, in a round Temple, made after the Corinthia matter, which done is lettered above the eighteenth part. The height is above 24. inches, the rest of the members are proportioned after the great. The window T. and X. is in the same Temple, and lettered about like the door; the pillars of Antipagamentum are all proportioned, which a man may find with the Compass. The door following, marked P. Z. is that of the Pantheon in Rome, also Corinthia house, which is 20. ancient palmes broad the height 40. And it is said, that the Antipagamentum is all of one piece, and I also have some no other. The Antipagamentum of this door is the breadth of the S. parts of the light thereof, and in the flues it is of a good thickness. But see that you see the light without taking a part of the flues, therefore it seemeth to such as look on it, to be broader than in effect it is. And this door, because it is so high, comes in perpendicular, and is not justified as the other as before; all the other members are proportioned according to the great 0. The Wall above the Gate, is like that of slate Colomnes above the last obse, which I have set downe by the Corinthia.
Of the Corinthia

The base hereunder set downe, is at Palestina, and is Corinthia; the widthesse is 2. fourt square; the Intersagement of the Plintter is broad the 6th part of the widenesse, brutted in manner as is said. The Dopose of Freise is the fourth part more then the Superculie. The Cornes and the reef, are like the Superculie, brutted as you see in the Figure. The Phrathybus or Arctenes, with that which is upon them, hang to lightly or loyly, as you se. The Frontispice is made, as in the order of Dobie, in the second Freise, is says.
Although this Door differs from all the other that ever I saw in any Antiquity, nevertheless, it is very pleasing to the sight and the work well; which Door is without Spoleta, about half a mile without the Bag, in an ancient Temple, made of the Columbian manner; of the proposition and particular members, I will say nothing; for here that lately wrote, may find it with a Compass.
Of Corinthia

Of this Order of Corinthia, which is pleasing unto all men, I will make some few parts of buildings, setting down some general rules, to satisfy those that take pleasure to read this work: and so that ancient workmen, in times past, that desired to make their things strong and everlasting, made pillars (wherein the pilasters are closed) which bear by the arches of a great thickness; so that cause, the front of a base entering hath the pillar (that is, the whole body) as broad before as the thickness of the Arch; but the thickness is a fourth part less. The thickness of the Columns shall be a first part of the pillar. The piaxes between the Columns are 2. Columns thicknesses in breadth: their height is somewhat less than 2. som e squares. The height of the Pedestals or 3. Columns thicknesses. The height of the Arch shall be made of 3. foorspaces. The height of the Columns with Holes and Capitalls, shall be 9. parts and a half. The breadth of the Arch with the pilasters, shall be half a Column. The impost which bear on the Arch, shall be of the same height, made, in manner, like that of the Theatre of Marcellus, in the Order of Ionia: which impost shall serve for a Cornice above the base; but the height of the door shall be made thus: Under the low Cornice, the Supercilie shall be made of the like height, and from thence downwards there shall be equal parts made to the story; whereas, one shall be the breadth of the light, and lastly the Cornice of the dace, as the eyes shall come with the windowes, and the Cornice of the Pedestal shall also come in like sort under the windowes. The light of the windowes shall be taken Diagonall wise: and the Antepagment a first part of the light. The particular numbers of the Pedestal, Half and Capitall, shall be made, as in the first part of this Order it is laid. Above the Columnes, the Architrave, Frise and Cornice shall be set, denoted in such manner as is showed in the beginning. The height of the second story shall be a fourth part less than the first, and all the numbers lettered accordingly, as you may see and measure it in the figure: the elevation above this Pedestal not for a whole story, but much lower: the height thereof is as much as the thickness of the Arch below, and the Cornice which follows the Architrave, and Frise, shall be the last part of the height of that story, which measures you may take from the Capitall at the core; and for those Dumenta, you may set a Fringe above: but setting it in the middle, it would hardly agree with the two small above the Planches, unless it ran round, whereby the works should be changed, and show better to the light.
The fourth Booke.

The eyght Chapter.
Of the Corinthia

When a workman will build a Temple, the higher the ground of pavement is elevated, so much faster (so building will the, fo to right ancient workmen have done, although they used other forms of Temples, much different from this here let column; for they made a body alone, but here, that are Christians, make our Temples in three parts, letting one part in the middle, and 3. parts on the sides: and sometimes the Chappels are made within the sides, as you see in the ground. The breadth of this Face shall be of 3. parts: one tenth of the base's thickness of a Column; the middlemost inter-Columns shall contain 7. parts; the greatest inter-Columns on the sides shall be 4. parts and an half. The inter-Columns with the Riche shall be 2. parts, and so the 3. parts shall be distributed. The Arches with the Pilasters shall be half a Column broad: the breadth of the Base shall be of 3. parts and an half: the height of 7. parts: the Impost under the Arch is as broad as the Arch. The height of the Pseudall is 3. parts: the height of the Column, with Capital andbases, is 9. parts and a half. The Architrave, Frase and Cornice shall be the fourth part of the height of the Columns: and so for the particular members and parts setting, the first rule shall be observed. The windows, Niches and other ornaments, a man may conceive in the figure and measure. The second storey shall be a fourth part shorter then the first, and all the members likewise accordingly: but the Architrave, Frase & Cornice, shall be placed in 3. equal parts, as I said of the other. The Falligies shall be made, as Vitruvius hath placed; in the order of Doric. The 2. stores that stand for beautifying and下降ing, shall be the fourth part of a Circle, wherein A. and B. is the Centers: and above each Arch that parteth the Chappels, a man may set such things, which will be a great upholding to the middlemost works, and also along upon them, the water may fall from the uppermost to the lowermost.
Of the Corinthia

The deciding of this Book ensueth thus, that the Pillar shalbe the third part of the widenesse of the Arch, but the thickenesse of the sest part: the thickenesse of the Columne also as much. The height with Base and Capital of ten partes and an halfe: the Arch, Pillaster, and Imposz of the balle Columnre: the measure of the Imposz a man may take from the Doric Chapter, altering the members: the same shall also serve for a Comice above the base, and for supporting of the two rows above the Shopes: the height of the Arch (so sometimes upon occasion, a man shall be forced to have it to low as can be) shall be of 3. parts in the breadth, and 5. in height; and the base also shall have the same proportion. The Antepamentum shall be the fur part of the light, and if the workman will make the height of the Arch of double proportion, the base also shall be of such proportion: but the Columnes should also have a great store under the Bases, with which things ancient workmen holpe themselves. The height of the Architecture, Fronte, and Comice are of 3. Columnes, and Columnes are of 2. Columnes thickenesse, as it is said in the first part of the rules, or in manner of some Antiquities aforethedef. And so that the space under the Arch to the soller, which is even with the flat of the Comice, should be great to make croumbustile, in such case my advice should be, to make an Arch right behind the Comice, and to make each space buttflitile, as spares in the ground. The height of the second Shop shall be one 4. parts less: the first, decreed in this manner: the Pedestum shall bee as high as the thickenesse of two of the lowest Columnes, and from thence onwards shall be made 7. parts, one for the Architecture, Fronte and Comice, and 4. for the Columns: the Arches with the Pillasters shall be of halfe a Columne; and for the rest, you shall observe the general rule: and if the Facie stands in any place as market, as it is showed by the windowes of shops, it will be safe and comely to make a leaning above the uppereast Comice, but for safety from raine, snowe, and frost, above all other things, it shall bee requisite to make a roofe of pannelement well closed and leaning forwade, because of the water that it will beater, if it be covered with lead. And although good workemen contente and think the setting of a Columne in an empiye place, which 3 also commend not, nevertheless, so that 3 have done the like matter upon the Porticos of Pompey in Rome, but made after the Doric maner, therefore I have presumed to set the like, if it may serve any many turns.
Of the Corinthia

For that the Venetians, in their buildings, be much Corinthia people, and also many windows and Pediments, therefore I have made this here, which is full of windows and Pediments, so that it may stand upon the stop, which is more commodious then bearings out and leanings over are; and the building will have a better show, for that all the things which a man may see within, will be seemly. The Comprehension of this Facte shall be thus; The breadth shalbe divided in 30 parts, and one of those parts shalbe the thickness of a Column, the middlemost between half of 4, but all the rest of 3, and so the 30 parts shalbe distributed. The height of the Columnas shall be of 10 parts 8 a half, with Bases and Capitals. The Architect, Frise and Cornice shall, together, be the fifth part of the height of the Colonnes. The members shalbe divided, as aforesaid. The height of the Windowes are a Column and a half wide, all in Perpendicular from the top to the bottom: but the height of the first windowes are of 3, parts broad, and 4, high: and those that shall stand upon them, have their height in Diagonal manner. The widening of the Doye shall be of 2 Columns; and the height 4. The Antepartmentum, with the Superice, Frise, and Cornice, shalbe divided, as it is said of the other before: and so shalbe the Cornice also of the Doye be, as the windowes below are. The second Story halbe lower then the first the fourth part: but the leanings with the Balusters being made, as high as a window is broad, the rest of the height halbe divided in 5 parts: one for the Architect, Frise and Cornice, and the other 4, for the Columnas, with Bases and Capitals. The height of the windows halbe of 2 four squares, with the rest of the Dimenstions, you must use as I have said of the like: and also the Doye of the Gallery shalbe like that before. The third Story halbe lesser more than the second one fourth part, and every member proportionally one part, the height of the windowes, they halbe of 2, four squares, and rather higher then lowe, because the height of it is least: The elevation also in the middle, halbe the fourth part lesser, as it is said of the other. The Architect, Frise and Cornice are the fourth part of that height. The Fasligion shalbe made, as it is said of the Doric Temple: and if there remayneth other measures, you must always turne to the first rule. Remember I will let no such ground, for the Perspectives of the Galleries shew all clearly.
The fourth Book.

The eyght Chapter. Fol. 53
Of the Corinthia

As I have at other times said, that the loomerman shall have Columns (two, but yet so that, that sometimes they will not move his turne, brestz the industrious and cunning workman bee such, that he can help himselfe therewith). The composition of this Gable shall bee thus, that the thickness of an Arch shall be of double height in breadth; the Pillar shall be half the same thickness before but that Pillar being made in these parts and one part thereof shall be the thickness of one Column: The inter-Columne of a half Columne: and so much more the Pillasters and the Arch hold. The height of the Pedestals, without the Plinthus under them, shall be as much as the whole breadth of the Pillaster, the members being deduced, as I have said of the Pedestals of Corinthia. The height of the Columne, with Bases and Capitals shall be of 1. parts, and that not therefore be false, so it is set on a stone, more for ornament, then for upholdinge of any weight. The height of the Architrave, Frese, and Comice shall be made of the fourth part of the Columnes, and in Perpendicular the Columnes shall brest out all the members without the Cyma or Cymate, which will go right through without considering, so good Antiquities like to bee so and brazen also, the light of Architecture in one age, made such brests in Rome, called biadaires. The thickness of the door, shall be of one Columnes thickness, and twice as high. The Antepagmentum, Superficies, and Frese, shall bee made so, that the Comices, which uphold the Columnes, shall serve also above the door, and also over the windowes. The thickness whereof shall bee of this Columnes thickness, and the height of sixe. The second Story shall be lesse then the first, the fourth part: but the whole height being deduced in 6. one shall be for the Podium, space for the spaces of the windowes, and the other for the Architrave, Frese and Comice, deduced in such manner, as you shall fix it in the order of Compolitics. The thickness of the windowes are in Perpendicular to the inthermain, and the breadth twice the height: the cell of the ornaments, as windowes and Niches, shall be done as in this Zonice Gable is described, which being wrought with more lyncynicke and flourishings, will bee a Corinthian housete. The breadth of the Niches with the Pillasters, shall be in Perpendicular, about the Columnes, but the thickness thereof being deduced in 7. One shall bee for one Nich, and 2. for the Pillasters. The height half of 3. breadth, because they stand forre from sight, whereby they shew shorter. The Pillars above the Comices are made for ornament, and also for comforte, to make Chimneyes of some of them.
Of the Corinthia

Things that are made to common use (although they are placed in all proportion and measure) are much commendable, but not admired. But things that are not made, if they were made for some causes, and well proportioned, shall not onely be commendable of most men, but also wondered at. Therefore this building following, which representeth a Temple, shall first be made of strong rustical matter, as you see, and of such height as the place and situation requireth, but it must not be higher than 3 mens length: On which flat is a pavement, a man shall go upon, beginning at the step A, standing within the enire, and going up to B, then it shall be flat, where the Temple shall have a broad walk, with a leaning round about. The while Temple shall be elevated from the walking 3 steps, and so come to the height of the Pedestal, or leaning, 3 steps more, and so come to, that you must go upon the step C. to the flat D, which shall be the height of the Pedestal, with another leaning, which shall be higher than the lowest. And from this flat, to the pavement of the Temple, the steps this steps shall be: the wideness of this face shall be divided in 24 parts, and one of these parts shall be the thickness of the Colonne. The middlemost inter-Colonne shall have 4 parts, those that stand on the sides, where the windowes are, shall be 5, parts: and where theitches shall be, they shall each of them have a part and an half, so shall the 24 parts be distributed. The same sobellate, as is without at the Pedestal, shall also be made under the Colonne, of which the height, the height without the Pilastres, the Vase shall be 3 parts. The height of the Colonnnes, with Vases and Capitales, shall be 3 parts and an half. The Architraves, Frise, and Cornice, shall be a fourth part of the Colonne, as it is sapo of others: and the members also be divided in 4 parts. The wideness of the Vase shall be 3 parts, and the height 7 parts and an half, which is about 2. four squares and an half: and this is done, so that by reason of the distance, they seemed shorter to a meanes height, then those that are below. The wideness of the windowes shall be one part and an half; but the height shall be more than 2. four squares, because of the space shortening. The breadth of the arches shall be one part, and the height of 3. breadth, for the same reason: the other that the Fasigium shall be, shall be like the Pedestal in height, and the Cornice the fourth part of the steps: and the other, where the mettell or Lanthane shall be, is also of the same height, which shall be most more then half round, as the Pedestal shall cover the Cornice. On the 4 corners of the Temple, for the main building, you may make 4. pyramides: the height whereof (without the Sisterns) shall be as the eyes are at the beginning of the Fasigium, and the Semina like the Fassetian; which Fassetian shall be made by the like rules, as are spoken of before, of the Temple of Doxia. The parts under the Temple, shall be called Dortexis, called Confessional, whereof I have seen many under the high Altar.
The fourth Booke.

The eyght Chapter. Fol.55
Of the Corinthia

Although in these our ages, men make no Arches Triumphaut of Marble or other Stones, hierarchically, when any great personage enters into a Column, they use to make Arches triumphaut so to welcome him in, which they set in the fairest places of the Column, adorned and painted in the most curious manner. Therefore, if you will make an Arch after the Corinthia manner, the proportion and measure shall be, that the light shall be of two square

squares, and one first part: the thickness of the Columns shall be the 3d. part of the thickness of the door or light: the height of the Pedestals shall be of this Columns thickest, and the height of the Column shall be of ten parts and an halfe. The Epistyle, Daphore, and Cornice, are together the fourth part of the height of the Column: and so from under the Arch, to under the Architrave, there shall hang a rope of two Columns thicknesses in height, and the remaining thereof under, shall be drawn up to the Center of the Arch. Touching the particular members, as the Pedestal, Base, Capital, Architrave, Frieze, and Cornice, you shall observe the rule before set downe: the breadth of the Arch, with the Pilasters, halfe a Column. The inter-Columne must be of a Column and an halfe. The Friezes are a Column breadth, and the height that, for a standing Plane to be placed in them. The height of the second order shall be made thus: the Column without Pedestal, shall be set in the upper part in the Cornice in these parts, and one of these parts shall be the height: but of that height there shall be four parts made one halve the Cornice above; the binding thereof, may be diuision out of the Chapter of Dorica, altering the members. The height of the Bales stand elevated above the Cornice the thickness of a Column below, and that is, for that the Projection of the Column darkeneth the rest of the Bales netherward. The Cornices shall give out, as you see them in the Figure. The height of the Pediment shall be made by one of the rules set downe in the Dorica. This present Figure both partly resemble the Arch at Ancona: but with great reverence, in regard of such a workman, I have brought the measures into one general rule, that every man may easily put such measure in use.
Of the Corinthia

As much as need required, I have spoken of Corinthia; although a man might speak of divers kindes of ornements: but it is needfull to speake of the ornament of a Chimney, because of the taphy be thence, so that a man cannot bee without it: for not onely in great, but also in small Chambers men bee to make fire, where, in such straight places, they set such Chimneyes within the wall, wherein a man may make divers ornaments after the Corinthia maner. But if you make them in this forme, then the wideness must be taken, according to the situation of the place: and the Pilaster shall be made of the first part of the broadnesse, but of the eight part the works shall be lamenber: the which Pilaster 32 Antepositionem, together with the Superclium, shall bee bred like the Architecture of the Corinthia. This frisce above, because it is graced, holde makes a fourth part greater then the Superclium. The Comice, together with the Capitals of the Shutiles, shall hold so much as the Superclium, and the same divided in the same, as it is said of the Comice, in the Corinthia. The breadth of the Shutiles 92 Anteores (as we say) alone, holde like the Pilaster, but beneath, which reacheth down to the opening, they holde one fourth part smaller; and under them there hang out two leaves, as you see in the Figure: which Denecta shall bee referred to the pleasures of the workeman. To make 32 leaves the ornament abone, there consisteth not much therein: and this invention hath served not only for a Chimney to beautifie it withall, but also for a doore, or other things, and the Frontispicis thereon will agree well with it, when you bee it for a doore.
The fourth Booke.  
The eyght Chapter.  Fol. 52.
Of the Corinthia

A Hall of a great Chamber there is a great Chimney required, proportioned according to the distance, the which
made a great convenience; therefore, if a man will make the Ribplings sufficient for such a bearing out, he must
make two places on the base: but in such a case (I mean) he should make two flat Columns, and before them round
Pillars, not close to the other, in such manner, that whatever thineth both the place for the Column must be, and in this
manner you shall also to them. As I spoke in the beginning of this Chapter, the Corinthian manner had her beginning
from a map, of the Colours of Corinthia: therefore I have placed a map here, instead of a Column; the width and
breadth of the opening, being made according to the place, the height shall be divided in nine parts, and one of those parts
shall be for the heads of the maps, and the whole Figure being formed and muddled, as you see then the first Columns
of the Pillar shall be of the same proportion, observing the measures before let down. Upon the Column, the Archi-
trave, Freize and Cornice shall be the height, together, shall be the fourth part of a Column lying, measured after
the rule aforesaid, from the Cornice upwars, to the place, and the height thereof, a man may abome in this manner,
as in the Figure: and who doubteth that this invention might not serve for a Door, making such Columns against
the wall, and specially before the Gate of Door of a Court, or place of triumph, and such like.

The end of the Corinthian manner of building.
The maner of Composita Building, with the Ornaments thereof.

The ninth Chapter.

Although Vitruvius speaketh of foure maner of Columnes, as Dorica, Ionica, Corinthia and Thulcan, giuing hereby vnto vs almost the first and simple maner of ornaments of Architecture: nevertheless, I have added one to the sayd maner, as (almost) a fifth maner of Pillar, composed of the others before-sayd, mouded thereunto by the authoritie of Romane worke, which we may see with our eyes. And, in truth, the workemans foresight ought to be such, that as occasion serueth, he may make many things by the sayd simple and compound worke, reflecting both the nature and the fulbriquet. And threewithall the workeman sometymes (to whose judgement many subiects may be referred) shall be abandoned and left by Vitruvius counsel, that could not conceaue all, whereby he should be brought into a straung, and compelled to do, as hefeath calle: (I mean) for that Vitruvius, in my opinion, speakeith not at all of this Composita, by some called, Latinois, and by others, Italice, which the old Romanes, peraduenture, being not able to goe beyond the invention of the Greekes, findes of the Dorica,after the example of men, and of the Ionica, resembling to women, and the Corinthia, after the forme of maydes, of the Ionica and Corinthia made a composition, pictureing the Volute of the Ionica, with the Echino in the Capital Corinthia, and thefe they viced more in Arches triumphant, than in any other things: which they did with good foresight, for that they triumphed over all those countries, frō whence the sayd worke had their beginnings, and so they might well at their pleasures, as commanders over them, set their orders together, as they have done in the great building of the Roman Colisse. And having therein placed the 3 orders one vpon the other, viz. Dorica, Ionica and Corinthia, they placed Composita above them all, which, by cuery one, is called so; although, as men may perceiue, the Capitals are almost Corinthia. But it was an excellent judgement, in my opinion, of them, that having placed this order in the highest part of the Colisse, which being farre off from mens sight, men should have feene, if they had set the Architrave, Freese and Cornice of the Ionica and Corinthia above the Columnes, that such worke, by long distance of time, would have prooved bad: but placing the Mutiles in the Freese, they made the work rich, and it holpe the Proyecture of the Corona; and withall, it brought another effect, which was, that the Architrave, Freese, and Cornice, seemed to be one Cornice alone, by means of the Modilions which were set in the Freese, for that they seemed great, obseruing their proportion.

The height of this Columne, Composita, shall, with Base and Capital, be of 10 parts: the Base shall be of halfe the Columne thicke: and it shall bee made Corinthia, with the measure set downe by the Corinthia: and this is yet faire in the Case of the Arch triumphant of Titus, and Vespasian, in Rome. You may make the Columne according as you see the Ionica, and sometime like the Corinthia, make the Volute somewhat greater then the Cornicoll of Corinthia: which Capital you see in the Arch atopysayd, and is set downe here in Figure; for the Architrave, Freese and Cornice, if it stand farre from mens sight, then the Architrave shall bee as high as the Columne is thicke above the Freese, where the Mutiles are, shall bee of the same height. The Clamate of the Bulks shall be of a first part: the Projecture of the Bulks shall be like the height. The height of the Corona, with her Clamate, behold, as much as the Architrave, and that nombre in 2 parts, one shall bee the Corona, the other the Clamate; the Projecture thereof, shall bee like the height: and this is a common rule, although that in the Figure, ethinking marked C, you may see the members and measures of that, which is in the Colisse atopysayd: and for that this Column is the hundreth of all others, therefore the Pedestal ought to bee somewhat then the red, following the common rule: the height thereof shall be a double breadth, that is, half, and of that height there shall be eight partes made, one for the Base, and one for the Corona: but of the particular members you may take the example here on the side, in the Figures, which, altogether, are proportioned accouding to the Pedestal of the axysayd Arch triumphant: and so, being a Columne of ten partes, the Pedestal shall also be ten partes in it else, proportioned after the Columne. And although men make all Pedestals in Perpendicular, yet in Athens, a most ancient Towne, there are some, that are lommed that manner in the upper part, which I blamem not.
The fourth Booke.
The ninth Chapter. Fol. 59
Of the Composita

That ancient workmen have used divers mixings of books, therefore I will not set down those that are best known and composed, so that the workman may choose out of them such as he thinketh will serve his turn best. The Capitall hereunder set, marked T. is composed of D此后, Jonic, and Corinthian; the Abacus and Cymatia is Doric; the Cymas and Strike, is Jonic: the Atrigall and Leaves, are Corinthian, as also the Bafe with the two Thous, is Dicroi: but the 2. Scotties, and the Atrigals, as also, because of the beautiness of thereof, it doth not to be Corinthian; which things are in Pressewe in Rome: the Capitall X. and also the Bafe, are of 2. kinds. Doric and Corinthian. The Abacus of the Capitall, and also the Bafe, is Doric; but the Bafe by means of the beautynesse of the work, may be named Corinthian, and so are the Leaves of the Capitall of Corinthian; but by that the Abacus is foursquare, and all the other members round: therefore you shall cut the Bafe under the Abacus, as you see it in the Figure. The Capitall A. with the monstrous horse, in place of Cymas, may be called Cymatia, and is in the Basilico del Foro transitterio. The Strike of the Column are different from others, as you may see them before the A. The Bafe X. is Composita, and is in Rome: the Capitall is more Corinthian, and is at the 3. Columns, beside the Colisses. The Capitall C. is composed of Jonic and Corinthian; and is in an Arch triumphant in Verona. The Capitall D. is in the same Arch, on some flat Columns. The Bafe T. is Composita, with the Atrigals, by which standeth upon the uppemost Thous, and is of Antiquitie in Rome.
Of the Composita

You are not many Arches triumphant made of Composita, and the most part are made of pieces, taken out of other buildings: nevertheless, having framed a general rule for them, therefore I will not set down any other invention of Composita of that kind: for the prominent workman, as necessitate required, may help himself with the inventions of old days, changing them into Composita. But I will show two orders of Chimneys of each sort of brick; the one within the wall, the other without. This Chimney, which should stand close within the wall, if you will make it in a small place, the height should be no higher than to a man's shoulders, that a man's eye and sight may not be hurt by the fire; and the wind shall be passing to the bigness of the place where it should be set. The height, up to the Architecture, shall be divided in 4 parts, one half the height of the Intaglement of the Pilasters, in such manner as you set them there at first done. And in this Composita, (because it is from them the other) I have made this Pilastrum much differing from the rest, nevertheless, taking a part of this invention from an ancient statue, which is at St. John de Lateran in Rome. The Architecture shall be of half the breadth of the Pilasters: the Climatic of the Art part: the red shall be divided in 7, whereas 3 parts shall be for the first Facies, and 4 for the second. The Allegations shall be made of a half part, taken between both the Facies. The Species, because it is cut, shall be made the fourth part higher than the Architecture: the Copice is the height of the Architecture, and there shall be yet 7 parts made of it. 2 for the Climatic under the Cojona; other 2 for the Cojona; and one for the Climatic thereof. The 2 that remain, are for the Palme, and the Decoration of all shall be in the height. But if you make the Pilaster of the first part of his height, and the other members diminished accordingly, it will be much more strong and peculiar, if the wall be of small stone. For the ornaments above the Cojona, you may chose whether you will make them of no, that is referred to the workman.
Of the Composita

A man may make other ornaments of Chimneys of this Composita to make, 9 in places some as this, because it is more convenient than the other manner of building: and for a changing of the other forme, you may also make this by this rule. The height of the Architrave being of a reasonable mans stature, you shall divide the same in 8 parts, whereof one shalbe for the breadth of the pediments to Holtes: Vitruius calleth them Podathrides. The height of the Pedestals shalbe as high as they were to set upon. The order above the Pediments, which holboth no rule at all, shalbe two parts and an halfe of the height of the Pediments. And for that also I have said, this manner is best for rule, therefore the leaves and other parts shalbe refereed to the workman. You may also sometimes set the Dorica and the Ionica, and sometime the Corinthic: that the Pediments: and for that the funnell, which receiveth the smoke, is lower, therefore you may make the small order above it, which will give it a spier forme then the vinaill, which goeth like a pironoid, or sharp by.
The whole is to have a great ingenuity, because of the diversity of composition in Ornamentals of buildings, for that there are some places in Architecture, of which there may, almost, certaine rules be giuen, for they are no accidents that happen contrary to our opinions; for every way we ha some Columnes, that with their different positions, these different measures in themselues, according to the places where they stand. These alterations are so made in buildings in 4 ways, that is, setting the Columnes almost in an Incline, without any companion to help it either on the sides or behind. These certainly bear a great weight, and in their height they got not above the sloping a rule: the example hereof is in the first Columna marked A, but if you place them against the wall (though they be round) by the which being undertaken and holpen, a man may make another the needle higher above the same: the example whereof is in the Column B. So also drawing alone two third parts from the wall, you may yet a thickeesse of 9 wall go higher then the other, so that you see the like in some buildings, that rise to nine thicker x halfe, and most in the Colisse of Rome, in the Door of Dopia, and is shewn in the 3. Column C, but they are more holpen when they have plasters on the sides, which bearing the weight, give the workman measures to make the Columnes more firmly, and so tender, that they may be said rather to be placed there to fill a space so beautifying then for strength. You may also have a Columna the third parts out of the wall, and on each side set halfe a pillar, which will help the Columnes so well, that you may make another the needle above; and in this case, the Architecte, Prade and Crowne may beare out upon the round Columna, yet although it were flat, because the base valume would hold the Architecture, e.g. on the doors: but upon one Columna alone, it is visible to make such workes bearing out, for the other parts besides should be abandooned without any helps. This example you see in the Column D. But when the Columnes have any weight to bear up, without the helpes of mother, and shall have 3 or Intercolumnes, it shall not be the might make to exceed with, yet, although they have Coup upon Coup to bear up: it is reason that they should be made better, that the workes may be more durable; and although the pedestal be a great help to raise by, Columnes, nevertheless if the Columnes be high enough, 3 would think it better if the Columnes had them not specially in the lowest Coup, but in the third and fourth Coup with reason. Pedestals and Pedestals also serve to raise by Columnes, which are the Intercolumnes obscure in Theaters and Amphitheatres.

But touching the setting of Columna upon Columna, there are divers reasons: The first is, that the projections of the pedestals of the Columnes placed above, should go no further out, then the thickness of the uppermost Columna, and this should be a most certaine reason: but for that the second Coup should leaff much from the first, and would issue no more for any other Coup, confedering the great lengthening another reason, and most to the purpose, is this: That the foot of the pedestal ought, at least, to be in Perpendicular with the Columna below, and to let the Columna above this Pedestall, lettered a fourth part from that which beareth under, as well in thickeesse as in height: so this rule agreed with that of Vitruvius in Theatron: which figure is above the Columna A. and if you will not letten the Columna so much, then you must make the uppermost Columna as thicke as the nexternall is in the uppermost part: but in this case, the flat or middle part of the Pedestall would be broader then the nexternall Columna is thicke below: nevertheless, that of the Theater of Marcellus works that effect. The example hereof is in the Columna B. and these two reasons are probable enough. But the antiquitie Romans, in the great Colisse of the Colisse, made the Columna Ioniaca, Corinthica and Composita all of one thickeesse: and the Doric, under the other, they made thicker, about the twentieth part. And this is in my opinion they did by good advice: for if they had leaffed all the Columnes the fourth part, one above the other, the last, in so great a building, by reason of the great distance, would have theobd been very small, which we now so to be of good correspondence, by reason of the height. The shewing of this is in the Columna C. And as the Columna above the Columna D is little that which is to be thought the one fourth part: for then, if a man hath a reasonable hent to make of 3 Columna, so I would not thinke it amisse, that a man should hent every Henti the fourth part according to Vitruvius advice: but if the building be high, then you were better observe the Theatron of the Colisse, that the Dorie and Ioniaca, Ioniaca and Corinthica, may each her about one height, but the Dorie has too evenly in height about the half part; and this is so (as I have sayd) because of the great distance: which part, by meanes of the great distance, seems to be of the height that the rest are: and although that the shewing of these Columna is Doricall, yet it is so in all sorts of Columna.
The fourth Book.

The ninth Chapter. Fol. 63.
Of Brick.

Having spoken of so many and diverse Ornaments of Stones, it is requisite, that I should also shew how they are to be placed in brick, and specially, when a man is to mix hard stones with bricks together, which requires great diligence and care: so that bricks are like field in a piece of wood, and hard stones like the bones to knit and hold them together. When two things, if they be not well and fully bound together, they will, in time, decay: and therefore the foundation being made in such manner as the place affordeth, it is requisite, that the ploughman should make ready all the hard stones, and also the bricks, with the rest of the stones belonging therunto, and so should come to lay and open the hard stones and the bricks together, all at one time: and it is requisite, that the hard stones should be set or are built in the wall, that although there were no matter to hold them together, yet they should, of themselves, stand fast in the wall; which doing, the work will be strong and continue hard. The example hereof is seen in the other side, by the figure A, where it is also shewn, how a man may make places both high, without fear. And if you have pillars with Columns to set upon them, where hard and soft stones are mixed together, if the hard stones be not well joined with the soft, as you see in the figure B, the work will not continue long. And if the Columns be of divers pieces, some of them (that is the least) shall go deeper into the wall, to hold the other the faster. But if the Columns be of one piece, then they would stand, at least, a third part within the wall; but the Bases and Capitals must enter much more into the wall, and above all the Corners and other Corners, which bear force out of the wall. The innermost part that is intended, must contrive that which is without, that it may bear it safe: but if at the same time a man will make any look to face upon the stones, then it is requisite, that the workman, before he begins to lay any stones above the ground, should make ready all his stones, together with the other stones belonging therunto: and so laying and knitting the stones with the bricks together, I say, that he shall not well to set some of the stones so deep into the wall, that they may hold the other pieces together by force, laying well in, as you see it in the figure C, that in time they may not open and break and be undone from one another. But that the wall, made of bricks, should not leak, and leaking, should break the thinner parts, by reason of the weight above, it is necessary to have brick well burnt, and mortar well tempered, a little more the stones little master, a bad lap and joined one upon the other. And above all, such works would not be made by any force, nor weight upon weight; to be pact in haste, but you must let it rest somewhat from lay to lay; so that a man will work in haste, and let great weight upon it, it is most certain, the wall will break, and the stones being not able to bear the weight, will break; but if it be made with leisure, then the stones will be as it should be: nevertheless, I would always more commend the work that is slowly done in the wall, then that which is joined together or covered; and especially, in my opinion, men should not make them in walls that stand outward, so that the houses which have been made so in former times, by ancient workmen, and were covered over with Marble and other fine stones, are now seen all without stones beside, and nothing but the Wall of Brick, that stood behind them, standeth still: but those buildings, where the hard stones are bound and joined into, and with the bricks, are yet standing: nevertheless, if you will make such a place simple, I think this the best way, although some workmen, in divers places of Italy, have made some building, with simple walls, leaving places in them for hard stones to be put in, and after, at another time, have put in such Ornaments as the rest, so that such stones are not well filled in the wall, but in a manner naked, you may in many places see the pieces false, and very bad made and made decay.
Of Doors of Wood, and of Metall.

The tenth Chapter.

As I think, I have sufficiently spoken of the Ornaments belonging to building of Stone, now I will speak of Doors that shut the houses: whether they be of Wood or Metall, I will set downe some Figures thereof: of the bookes I will say nothing, for all the world knowes them well enough: neverthelesse, those that were vued in ancient time, as you see them in the Figure A, were easilie to be opened and shut, then those which are now vued in all Countries, as in the Figure B. But whether these Doors are of Wood or Metall, their Ornaments shalbe made in such maner, that the fayrer the Ornaments of Stone are, the Ornament of the Gate also shalbe correspondent, that they may be one like the other, and to the contrary, if the Ornament bee slender, then you shall make the Door of Wood or Metall thereafter, which is to be referred to the workman: and to give you a new of such Ornaments, you shall here see five maners of Ornaments, which, for the most part, are taken out of Antiquities.
Of the Frames of Doores

If men make Doores, Gates, or Leanes (as the terms them) all of one piece, so that there needeth in that case nev-
tere wood nor panel to them, they make the bodies of the same piece of metal. But those that are made of wood, and
then covered over with Copper of reasonable thickness, which, if it be of flat plate, you must suffit one upon the o-
ther, and see, although they be fixed to purse a plate, or nailed together, and although the nature of wood is such, that it
will change as fast as the time of the year is due, or worse: therefore you will make such a doore, that shall be cov-
ered over with Copper. Thus, or any metal, you keep the further long here in the lines in the figures A. and B. on wood
waler: which longer, but remaneth still in the same frame; which is referred to the woodman, to make them thicker
or thinner, as he shall; according to the height that they shall beare; and to make also all the pieces of the long wood.
And as all the incident doores or glories through are commonly four squares, only those of gates of Doorees, or
everything Acciss, which are fast, but the others, in our days many times made round above, perevertere for more
strength; and also, so that in some cases they became the house itself, because I have the word figure, and so that,
in truth, a man cannot conceive all things: for many accidents happen to a man, human at such time when he is to build
some new house.
Of Ornaments of Pictures within and without the houses.

The eleventh Chapter.

Hat I may not leave out any kind of Ornaments, whereof I give not some rule for instruction, as well in Pictures as other things, I say, that the workman ought not only to take care of the Ornaments of stone or marble, but also of the Paynters works, to let out the walls withall: and it is requisite, that he should proceed in an order therein, as Surveyor of all the works: for this cause, that some Paynters have beene workmen good enough, touching the handling of their works, but for the rest, of little understanding, that designing to draw their skill in the playing of the colours, have disgraaced, and at some time spoyle a Story of a house, for want of consideration how to place the Pictures in the same. Therefore if they have a Forefront or Facette of a house to payne, it is ceretaine, there is no openesse to be left, where are or hatch is to be made, for those breake the building; and of a thing that is maffly and close, they transforme it into an open weake forme, like a rumous and raspit building. Also there should be no peripages nor beasts coloured, unless it were to trim and decke doores, wherein there are mens personages: but if the owner of the house, or the Paynter, define colours, that the work may not be broken nor spoyle, a man may cover a hacket wall over with cloth, and therein payne what he will: and also, after the manner of tymapths, a man may hang on the wall Garlands, and Strings of Leaues, and Fruits, Flowers, &c, and also Shields, Trophes, and such things as are to be staid: but if you will place the walls with frame matter, then you may fayne things of marble or other stones, cutting therein what you will: you may also beautifie some figures in Niches, with metal, and so the work will remayne fine, & worthy commendation of all those that know good works from bad. And the Author reheareth divers excellent workemen, whose for breddy sake I will omit, that only vied to payne nothing else but white and blacke in houses, and yet to excellently well, that it made men wonder to behold them. A man may alike, with good reason, make and set forth coryace openings in walls of lodgings, round about the Courts, and make ayre, lanthips, houfes, figures, beasts, and such like things, as bee will in colour. Also, if a man hath Chambers, Hallees, or other places, about the ground within, to payne and set forth, then a Paynter, in manner of Architecture, may make openings to see through them, as the place is: for above the fight a man must make nothing but ayre or skyes, rooves, high hillis, and the upper part of houfes: and if you place figures also about the sight, a man must vnder them, and not the ground whereon they stand. And if the Paynter will make a Hall or any other, or further roomes perpetually, he may, over the going in, with order of Architecture, make it to shew further then in effect is. And this, Balbo-ger (a man excellently well learned in Architecture) did, in beautifying the Hall of Aeginius Guye, a Marchant of Rome, where, in that fort he set out some Colonnes, and other Architecture to that purpose: so that Peter Artion, a man also skilful in Paynting and in Poetie, sayd, that there had not bene a perfect Paynter then in that house, although there was works aloft in it of Raphael's owne doing. And when the walls are paynted, and if you will have the roofes also done, then follow the steps of Antiqutie, making things that are called Grootes, which, for that you may make them as you will, they are calld, as Leaues, Flowers, Beasts, Birds, and other mixed matters. If a man maketh any clothes or apparel of figures, or which are made fast on them, therein a man may deas as he will. But if a Paynter will make any figures according to the life, in a roofe of a house, then he must be very skilful, and much exercized in Perpective worke, and very industrious to chuse such things as are fit for the place, and rather heavenly flying things, then earthly things, with such Arte, that he must shorten the figures so (although they bee monstrous) that when men stand a convenient distance off from them, they may re semble the life. Which thing is excellently well made in Loretto Mantua, and other places in Italy, by divers workemen: yet skilful workemen in our time have thinned such thining, for that (in truth) it is not to pleasing to the eyes of the common sort of people. Therefore Raphael Durbin, whom I will always name Divine, for that he never had his fellows, (I say no more) in this thing, as men judged of him when he was to paynt the roofes of Aeginius Guye his Gallery, thinned thining as much as he could: for when he came to the highest part of the roof, and there meant to make the banque of the gods, heavenly things, and such as servd to the purpoe of a roofe, taking away the hardnesh of thinning, set forth a cloth of azure colour, made fast to the strings or Garlands, as if it had beene a thing to bee fire, and therein made the banque so feemly, and so workemaniike, that the Gallery was rather esteemed for a preparation to a tymapth, then a playne paynting made vp on a wall. Therefore the workman, that ought not to bee skilful in Perpective worke, should not indure, as being Surveyor over all the workemen in the building, that any thing should bee made therein, without his counsell and aduice.
The fourth Booke.  

The twelfth Chapter.  Fol. 67

Of flat Rooffes, and the Ornaments thereof.

The twelfth Chapter.

Although in the Netherlands they use not to decke the Chambers in the Rooffes with wooden works, nevertheless, when a house without is made wholly after the old manner, it were unwise that the Rooffe should not be agreeable; as also the Bedsteads, Bankes, &c. And which is more, I would say, that each place should be 
dressed and fitted within, with things fitting to that which is formed outward. I say then, If the Rooffe be high, then the beams to be wide of space, and rising or bearing out well; and if a man will beautify it with Painting, it must be well done, and conformably painted, according to the greatness and distance thereof. It ought also to be made of light and brown colours; and in the middle of the field you must set a gilt Rooffe: but if a man will colour it, then the field must be blue, as piercing, but the Rooffes must be bound with some works or branches, that they may not seeme to hang in the ayre: and the Cornices which close up the square of other fields, must bee well gilt, or beautified with the same colour: but if so bee the Rooffe is not high enough, then you must make the worke thinner and smaller, or else the painting: and that you may understand it, I have set two figures to shew you, which notwithstanding are all one: the one of bare wood, the other painted, as I said before. And this Order I observed in the Rooffe of the great Library in the Palace of Venice, in the time of the Prince Andrea Gritti, because the Rooffe was lower then it should be, in respect of the widenesse and length of the Hall, and I made it of thinner works, for the reason aforesaid.
The Timber worke of the feeling aforesayd.
The fourth Booke. The twelfth Chapter. Fol. 68

The Ornaments and Garnishing of the same worke,
Another maner of Sieling.
The Garden, being an Ornament to the Building.
therefore these Mazes and Knots are set in Figure.
The fourth Book.

The thirteenth Chapter. Fol. 7

Lastly, our Author speaks of Arrows, to show how a man may make a bow, and place them, according to that description, so that they may be shot with a great archery, and thereby a man may procure of what stock and of what colour it is desired for, as to the size. So that in former times men made figures of arrows in their images, which served as patterns, and every man in such a case, as well as to fit them, as to fix them in place, according to the size and the shape of the arrows, that they may be shot with a great archery, and thereby a man may procure of what stock and of what colour it is desired for, as to the size. So that in former times men made figures of arrows in their images, which served as patterns, and every man in such a case, as well as to fit them, as to fix them in place, according to the size and the shape of the arrows, that they may be shot with a great archery, and thereby a man may procure of what stock and of what colour it is desired for, as to the size. So that in former times men made figures of arrows in their images, which served as patterns, and every man in such a case, as well as to fit them, as to fix them in place, according to the size and the shape of the arrows, that they may be shot with a great archery, and thereby a man may procure of what stock and of what colour it is desired for, as to the size.

The O. of the same measure that you set the Q. The space of the Q. is a quarter and a half of a square; some make it shorter. I will not explain these letters to be the best, but every man can take them as they please: it is also noted to take so much space as the small letters, and so that a man may make them a foot, or more, or less, high: which a man shall never bring to good palfes, without following after proportions.

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The end of the fourth Booke.
The first Booke
of Architecture, made by
Sebastian Serly, wherein there
are set downe certayne forms of Tem-

tles, according to the Ancient ma-

ner, and also servyng for
Christians.

Translated out of Italian into
Dutch, and out of Dutch into English.

LONDON.

Printed for Robert Peake, and are
to be sold at his Shop, neere Hol-
borne Conduit, next to the
Sunne Tauerne. 1611.
THE FIFTH BOOKE:
Of divers maners of Temples,

The fourteenth Chapter.

If though wee see and find divers formes of Temples and Churches in Christendome, as well ancient as moderne, yea for that I have formerly promisid to shew some Orders thereof, to accomplisli the number of my Bookes, therefore I will intreat of them, and set downe twelve severall manner of Temples, with their grounds and measures: and for that the round forme is the perfectest of all others, therefore I will begin with it: but though in our time, whether it be by reason of small devotion, or cruelty of men, there are no more great Churches begun to be made, and that men finish not them which in former time have beene begun, therefore I will make mine so small, as they may passe in reasonable manner, for that with small cost, they might in short time be made. The Diameter of this ground shall be as long as high, according to the Figure of the Circle, that is, of 6o. foote. The thickneffe of the wall shall be the fourth part of the Diameter, that is, 15. foote: that a man may easilie make the Chappells within it: which Chappells shall be 12. foot broad.

The Niches betweene the Pillars shall bee foure foote broad: the other in the Entrie, and of the three Chappells, shall be five foote and a halfe broad: and to spare charges of stone and lime, the great Niches shall be made without the Chappell: the bretth whereof shall bee 15. foote. This Chappell is eleuated from the earth at least five steps; and if it were higher, it were not amisse: for the earth in time rilleth, so that men goe downeward into many old Temples and Churches, whereunto, in former time they ascended vpwards: but this Stayre would alwaies be Written, according to Vitruuis writing, speaking of Temples, where he faith: that as a man with his right foote begins to clime vp, he may, with the layd right foote, step vpone the pavenement of the Temple. Touching the foundation, a man cannot faile, if hee maker it deepe and breeth enough: but the least bretth that a man can lay, is this: that a man shoulde from the Diameter of the thickneffe of the wall, make a perfect fourequare, and the Diagonus of this fquare shall be the bretth of the foundation vnder the wall. And lo, I thinke, Vitruuis writeth, where he speake of foundations. But touching the Stoves of foundations, in flayt or hard ground, and also in watry ground, I need not shew it here, because evey man knowes it.
Of diuers formes of Temples

Having heared the ground of this round Temple, this Figure sheweth the body of the Temple, both without and within, so that it is purposely made hoken, to oke both. The inner part of the Temple is made after the manner of Corinthia. The whole height from the pavement below, to the Rose above, is 60. foot; whereas 30. foot are to the hattle or round rose: the cell underneath, shall be divided in 3. parts and an halfe; whereas one part shalbe for Cope, fer and Arbitrane. The four parts and an halfe resting, halbe the height of the Columns, both Bales and Capitals, whereas altogether, you shall finde the particular measures in my fourth Booke, in the Corinthia. The Domes between the flat Pillars, shalbe 10. foot high; the other shalbe of 15. foot high. The hole above the House, halbe the fourth part of the Indensesse of the Diameter of the Temple; above, upon that hole, there may be a Lanthme made, stopp with glasse, so it may be let open, whereat there shall come in light into the middle of the Temple, so that the Chapells have light enough at their ventilaves: the top of this Temple will best be covered with Ledr: the Cope without, shall stand like that within, but much greater of members, because it standeth in the weather. Looking the Doores, you shall finde sufficiently set volume in my fourth Booke.
Although the ground of this Temple following is round also, yet it hath an alteration by the four bearings out, which are the Chappels and also the going in of the same fashion. The Diameter of this Temple is 44 feet, the thickness of the wall is a seventh part of the Diameter. The Chappels are 14, set in foursquare, with out the Nitches. The other 4, Nitches of small Chappels make 9, so broad; the fourcesquare Chappels have their light on the doors, but the light of the Temple above in the roofe, shall be under the third part of the Diameter, with a Lanthorne upon it, as it is said of the other; you shall goe by to this Temple also with four stages, and so that the corners without the Temple be always safe, I thinke it were not amisse to make a foursquare wall about it, as high as the going by, that people may not so easily come to it.
Of divers formes of Temples

Here you see the Chappel standing upright (whereof the ground is on the other side) which she wret as well within as without, because it seemeth as if it were broken. The height within is like the Diameter, that is, 48. feet. The hale shall be 13. the hale round coke, and the hale about for the light, as I said before, shall be about the six part of the Diameter; wherein there shall be a Lanthone, made with glasse, as the figure sheweth, and the Rose without, covered with 2. 2. & other Stuffs. From the Rose westwards, the Cornement shall be made of two fat and an halfe high, formed like Impost of the Arch of the Theater of Marcellus, in the fourth Booke and the seventh Chapter, folio 37. and shall serve for Capitalls, but shall be the Plinthus with the Gimatic, which shall serve for Cojona. The Pilasters are 12. 4. fat an halfe. The great Chappels are 21. foot high. The smallet Chappels shall be 13. foot and an halfe high, halfe round about. Above those 3. square Chappels, and over the going in, there may be flat courses, somewhat falling downe, to both the water: a man may also make steps within the thickness of the wall, to goe up, and an par 2. stone steps, to rest at, lean upon. The Temple may be covered with such flatts, as may best be provided: but Lead would be the surest.
The six Booke.

The fourteenth Chapter. Fol. 4

After the round figure, which is the perfectest, the best are the Oval: that is, like an Egg; therefore I have made a Temple of that fashion: which Temple shalbe 46. foot broad, and 66. foot long. The thickeinesse of the wall shall be 8. foot: within it the Chappels shall stand: and although they be not too large yet a man needs not cut them off. The widenes of the 3. greatest Chappels, holds 20. foot and an halfe, within the which are two Niches, each 4. foot broad. The Columns shall bee a foote and an halfe thick, and the halfe Columns accordingly. The spaces between the middlemost Columns shall be 7. foot and an halfe: the other shall contynge 4. foot and one fourth part. These two Chappels shall each of them have 2. windowes: the middlemost halve 6. foot wyde, and the other on the sides each three foot. The Chappell with the high Altar, halve 10. foot broad, and 6. 10. stature in the wall, with Niches like the great, and a windowe above the Altar, of 6. foot wide. The 4. other Chappels halve a halfe Circle, 10. foot wyde, having the like Niches also, and a window of 4. foot wyde, above the Altar. And for that this Chappell hath light enough of itself, it might suffice for the whole Temple: but to make it lighter, there may be windowes made above the Chappels. This Temple shall also go by five steps: the door that halve five foot wyde, and halve beautified with 4. Pillars, after the Corinthian manner: the going in Halve like the Chappell with the high Altar.
Of diuers formes of Temples.

This Figure ensuing, sheweth the Ovale Temple within, which from the Pavement to the Base, shall be 26 feets broad, that is, of 26. feet from the Pavement, till you come above the Cornice, it shall be 25. feet: which height divided in five, one part shall be for Architrae, Fronte and Cornice: the other 4. parts shall be for the height of the pillars, which separate the Chapells. The particular measures hereof you finde in my Fourth Book, in the order of Corinthias; so that this Temple is made of such booke. The height of the round Colomnes is but but 22. foot. The Architrae, that holdeth by the Arch, is 2. foot. The Gate (as it is laid in the ground) hath beautified with foure flat pillars, of such forme and measure, as those that stand within the Temple, and also with such Cornites: the Gate & Door shall have an Arch standing upon two pillars, betwixt the flat pillars: the roof of this Temple may be beautified, as you see it in the Figure, and richly also, making the Windows above the Cornice, hanging voiletts, as you see, and cover the Temple with Lead, which is best and to the windows shall bee preferred well enough.
Although this stone is not squared, which in building is not to be avoided, therefore within I have made it of ten corners. The Diameter of this Temple is 62. foot long; the Diameter of the Lanthone is 12. foot: the two great Chappels are 15. foot in square space, without the three steps, which are ten foot wide. This small Chappel is 15. foot broad, and goe 4. foot into the wall, to the whole Circel, which is 13. foot wide. The two great Chappels stand two windows, and the small one: the wide place of the doors is 7. foot and an half. The Gallery without, stand 10. foot broad, and 24. foot long. The 4. pillars thereof, stand 2. foot square. The middle place between the pillars, shall be 10. foot, and the other 2. spires stand 4. foot. The sides of the Gallery shall have a leaning place made with Balusters: In the sides of the Gates, there shall stand 2. pages of winding stairs, to goe by upon the post, and also round about the Temple. This Temple is 9. foot elevated from the ground, and it may be made hollow underneath.
Of divers formes of Temples

Athough this Temple is that, yet I will shew the measure wherein it is as high as broad within, that is, 62. foot.
The Lanthorne is also as high as broad to the Cornice: the Roofe is of halfe a Circle. The roofe of the Temple
is also halfe a Circle, high 31. foot, the cellethowards. The Cornice shall have two foot and an halfe, formed
like the Impost of the Theate of Marcellus, in the fourth Book, in the order of Johnson marked T. Folio 37.
This Cornice shall be set without, like the stannemout, but greater. The square pillars of the Postall, are 14-
foot high, with Walls and Capitol, Doric. The Archeitane is halfe the hight of the height of the Pillar; above
the Arch, the Cornice is the fourth part lest then the great, but of the same forme, and shall seem so Capitalled upon the
Pillars. About this Cornice, there shalbe a place butt-high, made with Iron Schutters. The two pieces about this
Temple, being the Chapells with them, that with the Arch, sheweth the greatest Chapell, whereas the light is 25-
foot. The other piece marked L. sheweth the least Chapell, which is also 25. foot high: the Pillars that separate the
Chapells are three too broad: the hight is 15. foot: and there shall be a Cornice made, which shall go round about the
Temple, surising for Capitals upon the said Pillars; which forme shalbe made after the Doric Temple, but a little
altered: the Cornice, being the Lanthorne, may be made with Architrave, Fresch and Cornice.
The first Book. The fourteenth Chapter. Fol. 6

The ground of the Temple followeth halfe the corners, being in Diameter 25. feet; and the wall 5. feet thick.

The breadth of the Chappel is 6. feet, and stand 4. feet within the wall. The breadth of the Horpes is 2. feet. The Door of the Temple is 5. feet wide, adorned with double pillars, which are 5. feet and a quarter thick. The going by is 4. steps, square of 2. feet, each one. Each Chappell hath a Window, of four foot and a half broad, which will bring in light enough, although there be no Lantern. On the 5. corners without the Temple, there shall be flat pillars made, of 2. feet and a quarter broad, coming out a little. And if you would make the Temple greater, and for want of Stones you could make it no thicker Columns; then you might make it Corinthian, or Ionick, or Dorick, if you will: and then you may help yourself with Pedestals.
Of divers forms of Temples

New I have showed the ground of the 6. corner Temple, must show it standing upright, and also describe it, as well within as without: so although the Temple be wholly closed up, yet I have set a Chappell above it, to last it within, for that they are all lines of one forms and the going in also is of the same form.

But touching the cutteth part, I say, that the height from the pavement below, till you come above the Comice, shall be 8. feet. The Comice round about the Temple, shall be made of a stone and a halfe: but the members of the laps Comice shall be made according to the Chapter of Doric, so that it shall also serve for Capitall upon the Pillars, at the 6. corners. Touching the Plinthus with the Clinatie, so that it shall serve as a Copana, it shall go but right through about the Pillars, as you may see in the figure. The Postall before shall be beautified both round Columns, and the last Counterpillars: where of the meanest intercolumns (of spaces between the Columns) shall be 7. feet and a halfe. The Columns shall be a foot and a halfe thick; but the space between each, Columns, and Pillars, shall be halfe a foot: these last Columns shall be 5. feet and then fourth parts high. The Capitale shall be Doric; but the Bases, because they stand below at the feet, in the caupon and

The wind, and also for that they should be the Bases for the flat Pillars, and the great Pillars, going about the Temple on all sides, herefore they shall be made Extensive. The height of the Square shall be a foote, wherein the Arch shall stand: and the Door shall be adorned as you see it in the figure. The going in shall be 5. steps at the lead. The Roof shall be covered with a thing, which in these Countries lasteth long, and is easy to be had, otherwise it were best to be of Lead: and this is touching the works without. To speak of the interall part, it is thus, that 1. Chappell hundred for all: the breadth of their Chappels hold each of them 10. foot: and in height 13. feet and a halfe, and enter 4. foot into the wall: on each side they place a niche, which is 2. foot broad: above the Altar there is a window, which is 4. feet and a halfe broad: and 7. feet high. The Comice within the Temple shall stand of the same height that the outermost, and shall also bee of the same figure: for the Plinthus with the Clinatie shall also go right through, round about the Temple, without bearing out about the Pillars: otherwise a man may make them much narrower, then they shall stand in the caupon and the wind. You may also make the Walls after Doric: and although all the other Temples formed before, have their heights within, like the breadth of the Diameter, to fall this, neere the cell, though it be small, be half a Diameter more higher, that is a Diameter and a halfe, which is longer and longer foots and a halfe.
Although those afterwards, and some Temples following, have no place for Bels to hang in, as the Christians use to have; nor any Altaries, nor other places for men to withdraw themselves in: yet they must, nevertheless, be hallowedly made without, but so, that men may go through the Temple into them: all which subjects and inventions shall not want in my other Booke. The ground of this Temple is 8. square: whereas the Diameter within half $\frac{1}{3}$. foot: and the wall 8. foot. The Chappis are 1. foot wide, and have 6. foot within the wall. Whose Chappis are of half a Circle, and the other 3. with the going in are 4. square. Each Chappell hath 2. Pièces, which are 4. foot broad. The 3. windows in the half's Circles are 4. foot broad: the other 3. with the Columns are 11. foot wide. The Doors in 5. foot wide. In the middle of the Temple a man may set an Altar, covered with a Tribune, upon 8. plinthes. The Diameter sacred halfe 12. foot long: and if you will make this Temple greater, you may make it more foute.
Of divers formes of Temples.

The Figure hereunder sheweth for the 8. square ground, where set dovre, and is the says Temple as it is without. From the highest key to the uppermost part of the Comices, it is 2½ fote and a halfe, which is the halfe of the innermost height. The Comice shall containe 2½ fote, divided as in the Chapter Dores; and hall also haere out once the Pilasters, without the Plinthus, as in the Figure. You shall also let a simple Pipe underneath those forth parts of a fote high. The breadth of the Pilasters at the corners, halfe of 3 fote: and those that stand inwards halfe but 2 fote broad. The Door is 5 fote wide, and halfe 1½ fote and a halfe high. The Ornament of this Door ye find in the fourth Doore, by the Jonic, Folio 38. The manner of the window is sufficiently shewne in the Figure: if you will have more light in the Temple, then you may make a hole above, and that to be covered with glasses, paynted wise, against the rays.
According to this internall Description, the Comices and Pillars are of some height like the internall: from the Comices upwards, the roof is a half Circle: the 3. greatest Chappels are roofd with Arches, and are 18. foot high. The round Columns have their quarters of a foot thick, and the half accordingly, and shall be six foot and an half high: the Architectures, wherein the Arch corners, shall also be three quarters of a foot: the inter-Columns in the middle, shall be four foot and an half, and on either side two foot and an half. The Chappels of half a Circle, shall also be 18. foot high: the Chappels of half ten foot high: the Tribune that should stand in the middle with the Altar, is figured above: and from the ground to above the Comice, it is 18. foot high: the Comice ment thereof is that to the cell is 5; the Pillars, where, on the sides, you may make Pillares with Archers, and all Donna Ooike, as well as height as without. The Tribune is of a half Circle.
Of divers formes of Temples.

Although this ground without is foursquare, yet within it is 8. corners, whereof the Diameter within is 65. foot, and the wall 16. foot. The going in of all the Chappells is 12. foot, and the wall there, is 9. foot and an halfe thicke. The corner Chappells halfe 16. foot square within; the Niche with Alter, halfe 12. foot broad; the 4. square, and two blind windows, halfe 3. foot and an halfe; the two latter Chappells halfe 22. foot long within, without the Niches. The Niches halfe 16. foot broad; the windows halfe 6. foot wide; the Portal within, is 27. foot long, and five foot wide right over against the flat pillars stand round Columns which are one foot and 3. quarters thicke; the door is 6. foot wide; the Portal within, is almost like one of the small Chappells. You may also see an high Alter in the middle, with a Tribune, whereof the Diameter is 20. foot; the Pillars are 10. foot, and an halfe thicke; those flat pillars at the corners are 7. foot broad.
This is the Orthographie of the statelyd ground, of the eight cornerd and foursquare Temple, which is the Figure as it is without, whereas I will describe the height: and heele, from the Pavement, to the highest part of the Comice. It is 22. foot, and an halfe: the height therof denided in five parts, one shal be for the Architrane, Frase, and Comice, the other five parts are for the Pillars, which being two foot and an halfe broad, yet they are not too long, because they stand two together, and little eased by. The measure of all together, you may finde in the order of Zion, in the fourth Booke. Above this Comice standeth the Tribune, whereas there shal stand a Lanthorne to give light into the middle of the Temple, whereas you may easely finde the measure, with the smalle foot that standeth in the ground. The round Colunners before the Portail, shalbe 13. foot high: the Architrane is a foot: above the Arch, the Comice halfe the thickness of a Colomne below, denided as in the Capitall of Doric. The Frontispiece rised to the Architrane of the Temple: the going vp is of fine steps: the small figure marked with A. is one of the Chapells with out, which comes ther foote out of the wall: the windowe therof is 15. foot high, beside the light above the Comice, and above it is halfe round, covered as yeases.
Of diuers formes of Temples.

Now I have given the ground and Orthography without of the Temple in squarespace, it will also describe the 8. corners Temple within, set it here beneath in Figure. And here you see how men going up the Steps which are figured in the entry of the ground, go up to 8 spare walkes. The height of this Temple within is almost like all the Temples before set downe, and also which are found in Antiquities, that is, as high as broad, which forme is taken out of the Circle. The round Booke, as for the halfe Circle, occupie the one halfe, and of the other halfe downwards three thalbe 5. parts made, whereof one part shall be for the Architrave, Frieze and Cornice, which have made after the Doric: the other 5. parts are for the wall with the Pillars, which also are 2. footes and a halfe broad, like the outermole, but to; Capitall and Sails, like the Doric: The measures both of Capitals, Walls, Architrave, Frieze and Cornice, you shall also find in the above-land fourth Booke, in the Order of Doris. The breadth of the going in of all the Chappes is 13. footes: but the height of the large Chappels is 24. footes. The 4. greatest Chappels which stand in the corners are 24. foote within, foursquare, with their Pillaters, with Arches upon them. The height of all the Arches, as well of those that are 19. footes broad, as those of 12. footes, shall all be 13. footes high. The Lanthorne Hall hold 13. footes in Diameter: and the rest the Architect shall easily find with the small footes.
The fifth Booke.  

The fourteenth Chapter.  

This ground standing hereunder may be named cross-wise, whereas the principal place in the middle containeth 43 foot in Diameter. The 4 niches, with the 4 goings through, are each 10 foot broad; but the goings through are 1 foot long. The four small temples hold in Diameter 36 foot; and their niches, and windows, wherein you may place altars, and the doors are each nine foot wide. The 4 places within the 4 corners, may be dwellings for priests, or other Church Officers, and are 16 foot square: above them, you may place four towers, and go up into them through the steps. The four round chapels may be celleries, and other places for men to withdraw themselves. This whole square, without including the four cross round Temple, containeth on all sides 82 foot. The principal going in shall have 9 steps, and the door may also be greater than the other two in the sides.
Of diuers formes of Temples

From the ground before them, here standeth the Orthography of the said Temple with one of the sides that is before, although a man should let them out allfour, at least thus, in this manner. The height of the first Storey, beginning at the highest step of the going up to the uppermost part of the Cornice, shalbe 33. foot; which height, divided in 6. parts, one shalbe for the Architrave, Frase and Cornice, and this shall incline the whole Temple round about. From this first Cornice, to the second of the middle Temple, it shalbe 23. foot: of this height you shall make 5. parts; whereof one shall be for the Frases, Cornice, and Architrave. The same great part of the Cornices shall also serve for the Lanthorns of the 4. lead Chappels: which Lanthorns within shall contain 8. foot in Diameter. The 5. Side against the 4. Towers shall have but a flat face, right like the foot of the gratest Lanthorne which standeth upon the round roofe. The tops Lanthone within shall hold 10. feet in Diameter; and the height without the hettle stone shalbe 16. foot: this height divided in 5. the one part shalbe for the Comnicement of this Lanthone, and the other shalbe Corinthian Pillars. The fourth Side of the Towers shall also be of the same height, and beautified with the same Comnicement; and although that from this Comnicement northwards, the Syde of the Towers stands not very handsomely, because they are forced to prowd to the Comnicement of the Temple, yet according to Antiquity, it is a fault to be borne withall. The uppermost parts, which in no text are set to any thing, shalbe as high as the thicke-ness of the said Towers. The 5. part of that height shalbe for the Comnicement, and the rest, for the Columns, made after the Jomice. Above the Cornice the leaning place shalbe made, with the round carvings, as you see.
Henceunder followeth the Orthographie of the aforesaid Temple within, that is, the halfe of the 3. Temples. And so that the midstmost Temple should receive more light then from the Lantern, as the other alfo doe : by the windowes belowe, it is requisite to make the Cornice without higher then the innermost : that a man may, almoft, receive the light perpendiculare wise, as you may consider it in the Figure. From the Pantom, to the highest part of the Cornice, it shalbe 44. foot. The Cornice (because there are no ther Columns nor Pillars about) a man may make taller, and at his pleasaure, to it bane not much bearing out, that it may not take away the light of the roofe. The Cornice shalbe a foote and a halfe high, and may bee made according to the Capital of Doica. The height of all the Niches are all 15. foote: above the Niches, there shal a Facie goe round about the whole part of the Temple, as well the small Temples as the great. Above the Facie the halfe round rootes of the 4. Chappells shalbe. About these 4. Chappells there shalbe a place, made a little hanging, to cut off the water, with a place half high round about, where, by the Doores, a man may go through to the Towers: and if this Temple standeth in any open place, then there will be a faire walk about ; you must be careful that you let no snow lay upon it, for it foureth in and hurteth the roofe. The Doores on the sides shalbe as 9. steps, although they stand not marked in the ground : and as the same the like buildings stand so high, or not so high, from the earth, a man may well make them places of benediction, or other wise. We se commonly, that round about the Churches all corners bane full, which is benvolunt for sanctified places: therefore I would thinke good, that it should be walled round about as high as the steps, that it might not be so easy for people to goe in, and that it were hallowed for a Church-yard. The Towers that stand behind in this halfe, because they stand not upon this Diameter, and alfo so little roomer, so that men may conceaue how they are placed: therefore they are not set downe in this Figure; and what there named wise, it is referred to the discretion of the workman, whoe, in building thereof, shall find many accidents which a man cannot foresee or remembre alen once.
Of divers formes of Temples.

Although the aforesaid Temple is shewed to bee croft-wise, nevertheless, this that is here set downe is much laker: and first, I will speake of the first going in, which shall serve for all the rest, so that they are all of one forme: the wideness is 30. foot, and the length 37. foot. The wall is seven foot thicke, in the middle, in every side, there are two Niches, which shall each of them be tenure foot broad. The Door is eight foot wide, the going through, to goe into the Circle, is 22. foot wide. The Pilaisters there, are seven foot thicke, the Niches, four foot. Within the Pilaisters the flanges shall stand to goe up, and that the Pilaisters should bee the safer to bear the Tribunes, in the four corners, behind against the Pilaisters, you shall make th' eights corner Chappells, of 18. foot in Diameter, and the wall is four foot thicke. The Niches, Doors, valumonies and blind WIndowes, shall be five foot wide. The coping of the Temple without, have their flat Pilaers of this four broad; the going up is of five steps.
The first Booke.

The fourteenth Chapter.

The Orthographie without of the four squared crosse Temple, is hereunder set downe, and is 44. foot broad at the going in; and the height from the ground to the Comice is 50. foot: the Comice ment is five foot: the rest reserved for the Pillars, which should be Ionica. The second slope is 22. foot high: which height shall be divided in the parts, one half for the Comice ment, and the other line for the Corinthia Columns. These two lines the Temple shall have, toward you shall have the measure in the fourth Booke. The slopes shall be 10. foot high, but here in the hand where it begins, sart, and indistinct much, it may stand much higher. Above the upper part of this Frontispiece or Roafe, there shall be a Comice of two foot, whereon the Bottle or the round slope shall stand, having a Lanthorne upon it, which is 10. foot high, without his cover. The part marked C. theveth the corner or roof with in, and the other marked L. theveth one of the 4. corner Chappels: and although these 2. steps, for a going up, hang only to this Door, they should also be made to the other two doores on the sides: and the ornament of the doors is good shall find in the after folio Booke, in the order of Ionica.
Of divers forms of Temples

Having viewed this foursquare cross Temple without, now here follows the part within, as it were. Diameter like, cut corn in 2 parts. And first, speaking of the middle wherein the Tribune and there is from one of the Corners of the Piastras, to the other, 30 feet. From the pavement below, to the highest part of the Cornice, it is also 30 feet. The height of the Frace, Architrave, and Cornice, is 7 feet, and this shall goe round about the Temple within. Upon this Cornice the Arches rest which bear up the Tribune. Above the Arches there is a great Facie; and from thence upwards it is 15 feet high. The Cornice shall be 2 feet: but shall not beare much over 30 out, not to let the roofe. From this Cornice northwards, to the Face, there shall be 8 having windows made, of 7 feet, four-square, as you see it in the Figure. The Lanthorne shall be 7 feet wide. From the pavement, to the hole of the Lanthorne, it shall be 77 feet high. The place where the high Alter standeth, is right over against the principal going in. In the great foursquare there may be an Alter Table set; and above it there shall be a great round tambour, as also above all the 4 Doores. I have not wrote any thing of the second Side: so by the ground and this Figure you may easily conceive it. And although I say nothing here of Towers, yet there may 2 at the least, be set above the Chapells in the corners: also, as in many other places it is shewed, the workman, upon good occasion, may alter some things: so although that in Italy, and here in these Countries (where the fame hath much) men desire small windows for columnes: nevertheless, those that dwell Southward, where it is sunnifer, and many times close together, may, according to the situation, make the windows great, and give more light to the Temples, without breaking Psyche, as it is said in the fourth Book of the Venetian Houses.
As I promised in my fourth Book, so I have showed divers fashions of Temples, viz. round, Soale, or Cylindrove, square, square-cornered, square-cornered, right cornerd, and cross-wise, not only after the manner of the Ancients, but also serving for Christians, in such forms as are at this day made in Italy, and elsewhere, where I thought I had sufficiently performed my promise, but for that Temples of Churches are made here in these countries cross-wise also, like Raphael's round (of St. Peter's Church) in Rome. In my third Book, therefore, I will set two or three more of that same here, wherein following the manner of the Ancients. The greatest going through, or walks in the middle of the Church, is 30 feet lower than the Chappels of half Circles, besides the 2 smaller Walks, or 25 feet above, and shall stand somewhat without the wall. The Diameter of the Tribune is 36 feet; the four small Tribunes, or round bases, are in Diameter 21 feet, but they shall not come out of the roofe. The cross-wise hath a base on either side, and the 2 half Circles are each of them 25 feet wide. The hindmost halfe Circle, where the high Alter standeth, is 31 feet wide. Besides the River, there are two right-cornered Tribunes, being 21 feet in Diameter. Before, at the greatest going into the Temple, is the middlemost base, 22 feet longer, and the 2 side bases 8 feet. On the sides, the Towers are 27 feet high; within the Naves, there stands a hyde gate to shut up the Whale. And although this Temple hath many steps or ladders, you may make use.
Of diuers formes of Temples

This is the Orthographie of the ground thereof, whereof the first Comice standeth 34. feet high which height divided in five parts, one part halfe for Comice, Niche, and Architectuare, and the rest shall be for the four Pillers, which shalbe five foot deep, and of Doria woode. The middlemell dome is 24. foot high; the two smaller on the sides halfe 13. foot high. The great and the small domes also shalbe beautified with some trophies, as you see in this Figure, taking the particular measures out of the Doria order, in my fourth Booke. The elevation or rising up in the middle, shall to the upper part of the Comice be 25. foot; and the Comice thereof shall be the fourth part lesse then the other Comices under it, made after the same of the Doria Chapter. The Frontispiece is likewise foot high, above it standeth the court of the Niche, with this Lanthaine upon it, the measure whereof, a man may take out of that before. Below, upon the first Comice, before the middlemell bearing up, 12. foot shall make a Balament of five foot high, above that Balament, you must place the two Toroes, which are 42. feet and an halfe high, making the Comice the fourth part lesse than the other, formed after the Doria Chapter. The third other shall be the fourth part lesse then the second, and the Comice thereafter: the fourth other shall also be a fourt part lesse then the third, and the Comice thereafter. The places beft-high, above these Comices, shalbe four foot high: and from the lit, to the point of the Pira- mides, there are 36. foot. You may double the windows out of my fourth Booke.
The fift Booke.  


The figure following sheweth the foresaid Temple within, whereof the length and breadth is set downe in the ground: but here I will speake of the height. The Comices shall stand high, as great as the vitreous, that is, the first part of 62. foot, but shallmore after the Jonic manner. The fat pillars that also be Jonic: the Impost which beareth the Arches, that also be Jonic; whose stone, touching the measures, you shall finde them all together written in my fourtenth Booke: all the Chappels shall have their light of themselves, as you see. Above the Chappels, the roof shallbe broken like a Vane, thereto to make an small counte hole, that it may yield more light: and that the Tribune may have more light then from the Lanthropie, you shall, from the corner by wards, make a Frese with a Lift, and therin also make counte holes for light. This small closed figure, standing alone, about the Temple, sheweth one of the five bones of the Temple, in the crossbouche, whereof the bones is 10. foot wide, and 20. high. The Architecture, Frese and Comices, under the corner of roofe, although the pillars are broken after another manner, with the Lift of the Portal, shall nevertheless agree with the Cominement that goeth round about the Temple. And although it do not here shew what the toppest space of the walk betweene the Pilasters and the roof is, and how that the smallest wall is not too high there, nor the some of the small batties and talhrons are not thers, yet the workman may imagine it by the ground: so that undertook such a piece of worke, must not be unskillfull.
Of duers formes of Temples.

This Temple following is 30. foote wide in the middle. The Crosse work, and also the Tribunate, together with the high Altar, shall each of them containe 30. foot. The Arches which bear the Tribunate, halfe 24. foote wide. The pillars on the sides, where the arches stand, halfe 5. foote broad. Each side of the Crosse work is 38. foote long, and shall each of them have a Door. The part before the high Altar, towards the altar, is 4. square. The pillars with the Arches, before the halle Circle of the high Altar, are 5. foote broad, and stand from other 24. foote. The halle at halle Circle is 23. foote wide. In the 2. corners on the sides of the high Altar, there are 2. Arches, which shalbe 17. foote wide in 4. square. From the Tribunate to the principal going in, there shall stand 3. Chapels on either side, which shalbe 15. foote within 4. square. The walkes betweene both shall be 4. foote thick. The windows shalbe 6. foote wide, and there Alters shall stand. The wall at the Doore shall be 4. foots thick, and on the sides where the arches stand, 5. foote. Here before there shall come a Gallery of 14. foote broad, and of 8. foote long. The Arches halfe 8. foote broad. On the sides of this portall the Towers shall stand, and shall stand so broad out at the sides, as the crosse worke. The Diameter within the Towers is 18. foote; and although they be 8. square, they may also be made 4. square. The windowe Stapes stand in the thickeynesse of the wall.

Touching the raging bright of the sayd Temple, sect 3 will speake of the portall, which with the help of the fourth Stape, and though the ground, you may note the particular masseure of this Dyver. The Portall above shall be flat without crosse, to take no light away in the Temple. From the Pavement to the top of the Comice which goeth round about the Temple, it shalbe 47. foots high. The Archiramus, Frieze and Comice, are 5. foote. The 2. Dyver containeth 37. foote: and their Cornices shall bee a forth part less then the other: the same heightes and Comices shall also serve for the second Order of the Towers, and halbe a forth part less then the second Order, and the Comice shall also serve the fourth part: above there shall stand a small rising or elevation, wherein the little Hall rest.

The figure above the closed Temple, marked with A. is the inner part of the 3. Chapells. The height from the pavement to the upper part of the Comice is 27. foote: the Comice shalbe 4. foote thicke, made like a Capital Doore. The other uppermost Comices shalbe as high as the outermost, and betweene this foot and the second Comices, there shall joyn a flat pillars, and between them the windows shall be made. The other figure above that afterward, marked B. is the Tribune, the altar and the sides of the crosse worke, with the open and the blood Doores. Though the one side (which was purposely broken) you may see the Arches within. The Comice under the Arches, which bear the Skeltte, is like the other Comice which goeth round about the Temple. The Comice which is about the Arch, and comes under the skeltte, halfe bald. The Lanthome must bee made according to the other Lanthomes afore described. The other part marked C. is one of the Doores on the sides, and is in that manner covered round. The Doore is 9. foote wide, and 18. foote high.
The fift Booke.

The fourteenthe Chapter. Fol.15
Of divers formes of Temples

Although that in the Netherlands there are very large Temples made, as the mazer in these places, not only with three Pies or walkes in the body, but also in the meanes not to write of such great Temples, for that each Towne hath her chiefe Church: but these are only to make such Churches in places, where by chance, the Churches are decayed, because in these places men can hardly make them by againe in great forme; and to this end I set this last figure here, which is plainer then the other. It shall be 30 foot wide, and 54 foot long. At each end before and behind, there shall stand a Cicle of 24 foot in Diameter. This shall Circle where the high Altar standeth, hath two inundanes, 6 foot wide. The door to enter into the Temple shall be 8 foot wide. In the circle of the Temple there shall stand two Chapells, being 18 foot long, and 12 foot broad. The windows behind the Altar shall be 4 foot wide. In the great Niches are also 12 foot wide, and the small 6 foot. The Columnes are two foot thickes: the inter-Columnes in the middle, are 6 foot, and the other on the sides are 3 foot. The 4 Niches within the body, are beautified with round Columnes standing in the wall. Without the Temple there is a Portall of 10 foot broad, and 32 foot long. The high Pilasters shall be 8 foot broad, as counterfoles, and the other shall be 6 foot. Above the Niches shall stand two Papes of winding Papes: and although this Church hath no Ceilings, yet you may make them on it, as the other do.
The first Booke.

The fourteenth Chapter, Fol. 16

This Figure within is good to understand, and from the pavement to the first Comice, it is 21 foot high, where the Comice is a first part; the other is for the Ionic columns. The Pedestal of the Niches is the first part, whereon three solid columns of Corinthian. The Frontispieces are three foot above the Comice; the blind windows above may also be opened. The walk, with the place half-high above the Pedestal, must be made leaning toward the water. The Chapels of the high Altar, marked A, have small niches of 7 foot and an half-high. The four square above the Altar, is so a table, broad 10 foot, and high 11 foot. The Temple without both a Doric Column, as high as the innermost. The part of the second order half pillars, and Comices upon them of two foot, which Comices shall be made according to the Impoll of the Theater of Marcellus, in the fourth Sister; and so that above on the side, in the roof of course, there is 3 foot of room to spare, there may be a leaning place made, both for an ornament, and also for use: the order must be covered over with Lead.